REVISIONARY TEST PAPER

JUNE 2011

GROUP IV

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FINAL EXAMINATION

(REVISED SYLLABUS - 2008)

GROUP - IV

Paper-15 : MANAGEMENT ACCOUNTING–ENTERPRISE PERFORMANCE MANAGEMENT

Q. 1. (a) Expand the following abbreviations :

(i) CRP
(ii) DBR
(iii) DRP
(iv) PLCM
(v) SQC
(vi) EFQM
(vii) DMAIC
(viii) JUSE
(ix) ALM
(x) SCP
(xi) QFD
(xii) DMADV
(xiii) TQC
(xiv) CWTQM
(xv) CMS

Q. 1. (b) Define the following terms :

(i) V in VAT Analysis
(ii) Matrix Organizational Structure
(iii) Bench Marking
(iv) Contribution Approach
(v) Talent Drain

Q. 1. (c) State if each of the following statements is True or False.

(i) Value Analysis process is a less important tool than Function Analysis System Technique
(ii) The term value has four different meanings-exchange value, cost value, use value, wealth value
(iii) Internal Quality costs consists of Preventive Costs, Appraisal Costs and Failure Cost
(iv) The phrases – right first time or zero defects-were promoted by the Japanese quality expert Kaoru Ishikawa.

(v) The Balance Score Card (BSC) puts more stress on financial parameters than on non financial parameters since its objective is the growth of the organization.

(vi) Theory Y style of management is a highly autocratic style.

(vii) The matrix organization structure is suitable for large projects.

(viii) The key factors of Theory of Constraints are contribution and profit.

(ix) Life Costing is a technique to establish the total cost of ownership.

(x) One of the goals JIT seeks to achieve is batch sizes of one.

(xi) Theory Y style of Management is a highly automatic style.

(xii) EVA encourage short term performance.

(xiii) Black Flash Accounting COMPARES PROFIT WITH THE COST OF PRODUCING A PRODUCT.

(xiv) The key factors 'Theory of Constraints' are Contribution & Profit.

(xv) Life Costing is a techniqueto establish the total cost of ownership.

Answer 1. (a)

(i) Capacity Requirement Planning
(ii) Drum Buffer Rope
(iii) Distribution Requirement Planning
(iv) Product Life Cycle Management
(v) Statistical Quality Control
(vi) European Foundation for Quality Control
(vii) Define, Measure, Analyze, Improve, Control
(viii) Japanese Union of Scientists and Engineers
(ix) Asset Life Cycle Management
(x) Supply Chain Planning
(xi) Quality Function Deployment
(xii) Define, Measure, Analyze, Design, Verify
(xiii) Total Quality Control
(xiv) Company Wide Total Quality Management
(xv) Capacity Management Strategy

Answer 1. (b)

(i) A logical structure starts with one or few raw materials and the product expands into a number of different products as it flows through its routings.

(ii) Matrix Organization Structure combines the coordination and control of the decentralized structure with the technical excellence of econimies of scaleof the functional structures to reap the benefits of both.

(iii) Benchmarking is a prosess of continuously comparing and measuring an organizations business process against business leader anywhere in the wotld to gain information that will help the organization take action to improve performance.

(iv) Contribution Approach is a method of preparing income statement that separates Variable cost from Fixed Cost to emphasize cost behavour patternfor the purpose of planning and control.

(v) Talent Drain is the second potential problem in succession planning. Because upper management must identify a small group of managers to receive training and development for promotion, those managers who are not assigned to development activities may feel overlooked leave the organizations. This turnover may reduce the number of talented managers of lower and middle levels of the organization.

Answer 1. (c)

(i) True
(ii) False
(iii) True
(iv) False
(v) False
(vi) False
(vii) False
(viii) False
(ix) True
(x) True
(xi) False
(xii) False
(xiii) False
(xiv) False
(xv) True

Q. 2. XYZ Ltd., supports the concept of the Life Cycle Costing for new investment decisions, covering its engineering activities, XYZ LTD., is to replace a number of its machines and the Chief Engineer is to decide between the 'AB' machine, a more expensive machine, with a life of 10 years and the 'CD' machine with an estimated life of 5 years. If the 'CD' machine is chosen, it is likely that it would be replaced at the end of 5 years. If the 'CD' machine is chosen, it is likely that it would be replaced at the end of 5 years by another 'CD' machine.

The pattern of maintenance and running costs differs between two types of machine and the relevant data are as given below :

	Rs.	
	AB	**CD**
Purchase price	**19,000**	**13,000**
Trade-in-value	**3,000**	**3,000**
Annual repair cost	**2,000**	**2,600**
Overhaul cost (p.a.)	**4,000**	**2,000**
	(at year 8)	**(at year 4)**
Estimated financing cost averaged		
Over machine life (p.a.)	**10%**	**10%**

Required: Recommend, with supporting figures, which machine to be purchased, stating any assumptions made.

[Given PVIF (10,10) = 0.39
PVIF (10,5) = 0.62
PVIFA (10,10) = 6.15
PVIFA (10,5) = 3.80

PV factor @ 10% for 4 years = 0.68

PV factor @10% for 8 years = 0.47]

PVIF means present value interest factor.

PVIFA means present value interest factor for an Annuity.

Answer 2.

AB M/c- 10 years Life

	Year	Cost (Rs.)	P/V factor	Discounted Cost (Rs.)
Purchase Price	0	19,000	1.00	19,000
Overhaul Costs	8	4,000	0.47	1,880
Trade-in-value	10	(3,000)	0.39	(1,170)
Annual Repair Cost	1-10	2,000	6.15	12,300
				32,010

Annualized equivalent = $\frac{\text{Rs. } 32,110}{6.15}$ = **Rs. 5,221**

CD M/c– 5 years Life

	Year	Cost (Rs.)	P/V factor	Discounted Cost (Rs.)
Purchase Price	0	13,000	1.00	13,000
Overhaul Costs	4	2,000	0.68	1,360
Trade-in-value	5	(3,000)	0.62	(1,860)
Annual Repair Cost	1-5	2,600	3.80	9,880
				22,380

Annualized equivalent = $\frac{\text{Rs. } 22,380}{3.80}$ = **Rs. 5,890**

Conclusion: AB M/c should be purchased.

Q. 3. An Engineering Company produces product P in its Production Shop 'A'. The overhead recovery rate is 100% of direct wages based on the following budgeted figures :

Direct wages:	**1,60,000**
Variable overheads	**64,000**
Fixed overheads	**96,000**

The production plan for the same budget period envisages an output of 18,000 units of P, whose sales and cost data are as under :

	Rs./unit
Selling price:	**42**
Direct materials	**12**
Direct wages	**8**
Total overheads	**8**

The company proposes to use the balance capacity of shop A after completing the above said production plan for the manufacture of component Q, whose cost data are as under:

	Rs./unit
Direct materials	**8**
Direct wages	**16**
Total overheads	**16**

The component Q is used by the company n the manufacture of some other product in another production department.

The company receives an export order from abroad for the purchase of 2000 units of product P at Rs. 30 each. This offer can be accepted by diverting the capacity from component Q. In that event, the company has to buy the component which is available from an outside supplier at a price of Rs. 40 each.

You are required to evaluate the alternative courses of action and state with reasons whether the spare capacity should be utilized for the manufacture of

- **i. The component Q or;**
- **ii. 2000 units of product P for export and buying of the component Q from the outside supplier.**

Answer 3.

First let up split the overhead recovery rate into variable and fixed.

Variable overhead recovery rate = $\frac{64,000}{1,60,000} \times 100 = 40\%$

Fixed overhead recovery rate = $\frac{96,000}{1,60,000} \times 100 = 60\%$

Fixed overhead is not relevant for decision – making.

Hence the variable cost of P and Q has been worked out as below :

	P	**Q**
Direct Materials	12.00	8.00
Direct Wages	8.00	16.00
Variable O/H @ 40% of Direct Wages	3.20	6.40
Variable Cost	23.20	30.40
Selling Price (Export)	30.00	
Contribution	6.80	
Purchase Price		40.00
Loss		9.60

	Rs.
If the Product P is produced,	
Contribution for 2000 units = 2000 × 6.80	13,600
Then the component of Q is to be bought from the outside supplier.	
In such a case, the loss will be the loss will be 1000 × 9.60	9,600
Net Profit on export	4,000

Spare Capacity should be utilized for export of 2000 units of P. 1000 units of Q may be bought from outside Supplier. Then the net profit on export would be Rs.4,000.

Note :

Direct Wages	**Rs./unit**
P	8
Q	16

Hence for 1000 units of Q capacity, 2000 units of P can be manufactured.

Q. 4. (a) What is life Cycle Costing? Explain the stages in product life cycle?

(b) What is Intranet? What are its advantages?

Answer 4. (a)

Life cycle costing is a technique which takes account of the total cost of owning a physical asset, or making a product, during its economic life. It includes the costs associated with acquiring, using, caring for and disposing of physical assets, including the feasibility studies, research, design, development, production, maintenance, replacement and disposal, as well as support, training and operating costs generated by the acquisition, use, maintenance and replacement of permanent physical assets.

Stages in Product Life Cycle :

There are five distinct stages in the life cycle of a product as follows :

Introduction stage – Research and engineering skill leads to product development. The product is put on the market and its awareness and acceptance are minimal. Promotional costs will be high, sales revenue low and profits probably negative. The skill that is exhibited in testing and launching the product will rank high in this phase as critical factor in securing success and initial market acceptance. Sales of new products usually rise slowly at first.

Growth Stage – In the growth stage product penetration into the market and sales will increase because of the cumulative effects of introductory promotion, distribution. Since costs will be lower than in the earlier stage, the product will start to make a profit contribution. Following the consumer acceptance in the launch stage it now becomes vital or secure wholesaler/retailer support. But to sustain growth, consumer satisfaction must be ensured at this stage. If the product is successful, growth usually accelerates at some point, often catching the innovator by surprise.

Maturity Stage – This stage begins after sales cease to rise exponentially. The causes of the declining percentage growth rate the market saturation – eventually most potential customers have tried the product and sales settle at a rate governed by population growth and the replacement rate of satisfied buyers. In addition there were no new distribution channels to fill. This is usually the longest stage in the cycle, and most existing products are in this stage. The period over which sales are maintained depends upon the firm's ability to stretch the cycle by means of market segmentation and finding new uses for it.

Saturation stage – As the market becomes saturated, pressure is exerted for a new product and sales along with profit begin to fall. Intensified marketing effort may prolong the period of maturity, but only by increasing costs disproportionately.

Declining Stage – Eventually most products and brands enter a period of declining sales. This may be caused by the following factors :

- Technical advances leading to product substitution
- Fashion and changing tastes
- Exogenous cost factors will reduce profitability until it reaches zero at which point the product's life is commercially complete.

Answer 4. (b)

An intranet is a private computer network that uses Internet protocols and network connectivity to securely share part of an organization's information or operations with its employees. Sometimes the term refers only to the most visible service, the internal website. Briefly, an intranet can be understood as "a private version of an Internet," or as a version of the Internet confined to an organization. Through such devices and systems off-site employees can access company information, computing resources and internal communications.

Advantages of intranets :

1. Workforce productivity – Intranets can help users to locate and view information faster and use applications relevant to their roles and responsibilities. Users can access data held in any database the organization wants to make available, anytime and - subject to security provisions - from anywhere within the company workstations.
2. Time – With intranets, organizations can make more information available to employees on a "pull" basis (i.e.: employees can link to relevant information at a time which suits them) rather than being deluged indiscriminately by emails.
3. Communication – Intranets can serve as powerful tools for communication within an organization, vertically and horizontally. From a communications standpoint, intranets are useful to communicate strategic initiatives that have a global reach throughout the organization. The type of information that can easily be conveyed is the purpose of the initiative and what the initiative is aiming to achieve, who is driving the initiative, results achieved to date, and who to speak to for more information. By providing this information on the intranet, staff have the opportunity to keep up-to-date with the strategic focus of the organization.
4. Knowledge Management – Web publishing allows 'cumbersome' corporate knowledge to be maintained and easily accessed throughout the company using hypermedia and Web technologies. Examples include: employee manuals, benefits documents, company policies, business standards, news feeds, and even training, can be accessed using common Internet standards (Acrobat files, Flash files, CGI applications). Because each business unit can update the online copy of a document, the most recent version is always available to employees using the intranet.
5. Business operations and management – Intranets are also being used as a platform for developing and deploying applications to support business operations and decisions across the internetworked enterprise.
6. Cost-effective – Users can view information and data via web-browser rather than maintaining physical documents such as procedure manuals, internal phone list and requisition forms.
7. Promote common corporate culture – Every user is viewing the same information within the Intranet.
8. Enhance Collaboration – With information easily accessible by all authorised users, teamwork is enabled.

Q. 5. A confectioner sells confectionery items. Past data of demand/week in hundred kilograms with frequency is given below :

Demand/week	**0**	**5**	**10**	**15**	**20**	**25**
Frequency	**2**	**11**	**8**	**21**	**5**	**3**

Using the following sequence of random numbers, generate the demand for the next 10 weeks. Also find out the average demand per week.

Random Numbers : 35, 52, 13, 90, 23, 73, 34, 57, 35, 83.

Answer 5.

Random No. Range Table for Demand :

Demand/week	Frequency	Probability	Cum. Probability	Range
0	2	0.04	0.04	00-03
5	11	0.22	0.26	04-25
10	8	0.16	0.42	26-41
15	21	0.42	0.84	42-83
20	5	0.10	0.94	84-93
25	3	0.06	1.00	94-99

$\Sigma f = 50$ $\Sigma p = 1.00$

Simulated Values for next 10 weeks :

Weeks	Random number	Demand
1	35	10
2	52	15
3	13	5
4	90	20
5	23	5
6	73	15
7	34	10
8	57	15
9	35	10
10	83	15

Average weekly demand = 120/10 = 12 (Hundred kilograms).

Q. 6. X Ltd., has been approached by a customer who would like a special job to be done for him and is willing to pay Rs.22,000 for it. The job would require the following materials :

Materials	Total units required	Units already in stock	Book value of Units in stock (Rs. unit)	Realisable value (Rs./unit)	Replacement cost (Rs./unit)
A	**1,000**	**0**	**-**	**-**	**6**
B	**1,000**	**600**	**2**	**2.5**	**5**
C	**1,000**	**700**	**3**	**2.5**	**4**
D	**200**	**200**	**4**	**6**	**9**

i Material B is used regularly by X Ltd., and if stocks were required for this job, they would need to be replaced to meet other production demand.

ii Materials C and D are in stock as the result of previous excess purchase and they have a restricted use. No other use could be found for material C but material D could be used in another job as substitute for 3000 units of material, which currently cost Rs.5 per unit (of which the company has no units in stock at the moment).

What are the relevant costs of material, in deciding whether or not to accept the contract? Assume all other expenses on this contract are to be specially incurred besides the relevant cost of material is Rs. 550.

Answer 6.

Computation of relevant cost of the job :

A	(1000 × 6)	6000.00
B	(1000 × 5)	5000.00
C	[(700 × 2.5) + (300 × 4)]	2950.00
D	(300 × 5)	1500.00
		15,450.00
Add Other expenses		550.00
		16,000.00

Conclusion :

As the revenue from the order, which is more than the relevant cost of Rs.16,000, the order should be accepted.

Q. 7. (a) Write a note on Total Quality Management.

(b) Differentiate between Quality Planning, Quality Control & Quality Improvement.

Answer 7. (a)

Quality is considered a by-product of the manufacturing system, i.e. each individual process has some variation that will lead to the production of some defective units. If the resulting defective rate is too high, compared to the established quality standards, quality inspectors will identify and send them back for rework. The approach is expensive and does not guarantee the desired quality, because quality maintenance and ensuring it self can not be inspected into a product. This approach assigns the responsibility for quality to quality control managers.

A more unlighted approach to quality emphasizes building quality into the product by studying and improving activities that affect quality, from marketing through design to manufacturing. This new approach is referred to as Total Quality Management (TQM).

It is an active approach encompassing a company-wide operating philosophy and system for continious improvement of quality. It demands co-operation from everyone in the company, from the top management down to workers.

The principles of TQM are as follows :

(i) Customer focus,

(ii) Managerial Leadership,

(iii) Belief in continious improvement.

(iv) The current thinking on TQM is moving from Quality of product and service to Quality of people to embrace also Quality of environment. ISO 14000 standard supports this.

Answer 7. (b)

Difference between Quality Planning, Quality Control & Quality Improvement :

Quality Planning	Quality Control	Quality Improvement
Determine who arethe Customers	Choose control subjectswhat to control?	Establish the infrastructure neededto secure annual qualityimprovement
Determine the neds ofthe Customers	Choose units of measure-ments-EvaluateMeasurements	Identify the specific needs for improvement - the improvement projects
Develop product features that respond to the customer's needs.	Establish standards of performance	For each project establish a project team with clear responsibility for bringing the project to a successful conclusion
Develop processes that are able to product feature	Measure actual performance	Provide the resources, motivation and training needed by the teams to :
Transfer the resulting plansto the operating forces.	Interpret the difference(actual versus standard)	Diagnose the causes
	Take action on difference	Stimulate establishment of a remedy Establish controls to hold the gains

Q. 8. Division K is a profit centre which produces three products L, M & N. Each Product has an external market.

Products	**L**	**M**	**N**
External Market Price per unit	**Rs. 48**	**Rs. 46**	**Rs. 40**
Variable Cost of Production in Division L	**Rs. 33**	**Rs. 24**	**Rs. 28**
Labour Hours required per unit in Div L	**3**	**4**	**2**

Product M can be transferred to Division J , BUT THE MAXIMUM QUANTITY THAT might be required for transfer is 300 units of M.

Products	**L**	**M**	**N**
The maximum External Sales are	**800 units**	**500 units**	**300 units**

Instead of receiving transfers of Product M from Division K, Division J could buy similar product in the open market at a slightly cheaper price of Rs45 per unit.

What should the transfer price be for each unit for 300 units of Y,IF THE TOTAL labour hours available in Division K are :

(i) 3800 hours

(ii) 5600 hours

Answer 8.

Computation of Contribution per labour hour from external Sales.

Products	L	M	N
External Market Price per unit	Rs. 48	Rs. 46	Rs. 40
Variable Cost of Production in Division L	Rs. 33	Rs. 24	Rs. 28
Contribution	Rs. 15	Rs. 22	Rs. 12
Labour Hours required per unit in Div L	3	4	2
Contribution per Labour hour	Rs. 5	Rs. 5.50	Rs. 6
Ranking	III	II	I

Computation of Transfer Price when the capacity is 3800 hours.

Hours required for N = 300 × 2 = 600

Hours required for M = 500 × 4 = 2000

2600

L = 800 × 3 = 2400

5000

The existing capacity is not sufficient to produce the units to meet the external sales.In order to transfer 300 units of M,1200 hours are required in which division K will give up the production of L to this extent.

Variable Cost of M	Rs. 24
(+) Contribution lost by giving up the production	
Of L to the extent of 1200 hours = 1200 × 5 = 6000	
Opportunity Cost per unit	Rs. 20
Required Transfer Price	Rs. 44

Computation of Transfer Price when the capacity is 5600 hours

Variable Cost of M	Rs. 24
(+) Contribution lost by giving up the production	
Of L to the extent of 600 hours = 600 × 5 = 3000	
Opportunity Cost per unit	Rs. 10
Required Transfer Price	Rs. 34

Q. 9. (a) Your Company has estimated the unit variable cost of a product to be Rs.10 and the selling price is Rs. 15 per unit. Budgeted sales for the year are 20,000 units.

Estimated fixed costs are as follows :

Fixed cost per annum Rs.	Probability
50,000	**0.1**
60,000	**0.3**
70,000	**0.3**
80,000	**0.2**
90,000	**0.1**

What is the probability that the company will equal or exceed its target profit of Rs. 25, 000 for the year?

(b) (Sensitivity to changes in the levels of plant value, running costs and saving of a project) x ltd. Is considering a project with the following cash flows :

Year	purchase of plant	running cost	savings
0	Rs. (7,000)		
1		Rs. 2,000	Rs. 6,000
2		Rs. 2,500	Rs. 7,000

The cost of capital is 8%. Measure the sensitivity of the project to changes in the levels of Plant Value. Running Costs and Savings (Considering each factor at a time) such that Net Present Value becomes zero. Which factor is more sensitive to affect the acceptability of the project. The present value factors at 8% are as follows:

Year	Factor
0	1.00
1	0.93
2	0.86

Answer 9. (a)

Budgeted sales for the year	20,000 units
Budgeted contribution per unit Rs. 15 – Rs. 10 =	Rs. 5
Budgeted total contribution = 20,000 × Rs. 5	Rs.1,00,000
Target profit	Rs. 25,000
Maximum fixed cost to meet the target	Rs. 75,000

The probability of fixed cost of Rs. 75,000 will be = 0.1 + 0.3 + 0.3 = 0.7

Answer 9. (b)

Present value of cash flows :

Year	Discount factor at 8%	PV of Plant cost	PV of Running cost	PV of Savings	NPV
0	1.00	(Rs. 7000)	–	–	(Rs. 7,000)
1	0.93		(Rs. 1,860)	Rs. 5,580	3,720
2	0.86		(2,150)	6,020	3,870
		(Rs. 7,000)	(4,010)	11,600	NPV 590

The project has positive NPV and therefore may be accepted. The changes in cash flows which would need to occur before the project just breaks-even (NPV = 0)

Sensitivity Analysis (Variation of PV of Rs.590)

(1) The plant cost would need to increase by viz. (Rs. 590 / 7,000) × 100 = 8.4%

(2) The running cost would need to increase by (590 / 4,010) × 100 = 14.7%

(3) Savings will fall short by: (590 / 11,600) × 100 = 5.1%

Savings is therefore more sensitive to affect the accountability of the project.

Q. 10. A company using a detailed system of standard costing finds that the cost of investigation of variances is Rs. 20,000. If after investigation an out of control situation is discovered, the cost of correction is Rs. 30000. If no investigation is made,the present value of extra cost involved is Rs. 1,50,000. The probability of the process being in control is 0.82 and the probability of the process being out of control is 0.18. You are required to advise :

(i) Whether investigation of the variances should be undertaken or not?

(ii) The probability at which it is desirable to institute investigation into variances.

Answer 10.

(i) Cost of Investigation = 20,000 + 0.18 (30,000) = 25,400

Cost of Investigation is not conducted = 1,50,000 × 0.18 = 27,000

Hence it is worthwhile to undertake the investigation.

(ii) Let X be the probability of process being in- control where it is desirable to institute investigation into variances.

i.e, 20,000 + 30,000 (1-X) = 1,50,000 (1-X)

X = 83.33%

Therefore, if the probability of the process being in — control is 83.33% or less, it is better to investigate in variances, or else it is not necessary.

Q. 11. (a) What are the benefits of Activity Based Management?

(b) What is Value Chain Analysis?

Answer 11. (a)

Activity Based Management :

ABM currently being used for a variety of business applications. Such as:

1. Cost Reduction.
2. Activity Based Budgeting.
3. Business process re-engineering.
4. Benchmarking
5. Performance measurement.

1. Cost reduction :

ABCM helps the organization to identify cost against activities and to find opportunities to streamline or reduce the costs or eliminate the entire activity, especially if there is no value added. It is particularly useful in identifying and quantifying process waste and providing vehicle for continuous process improvement through continuous cost reduction.

2. Activity Based Budgeting :

Activity Based Budgeting analyse the resource input or cost for each activity. It provides a framework for estimating the amount of resources required in accordance with the budgeted level of activity. Actual results can be compared with budgeted results to highlight both in financial and non-financial terms those activities with major discrepancies from budget for potential reduction in supply of resources. It is a planning and control system which seeks to support the objectives of continuous improvement.

3. Business process re-engineering :

Business process re-engineering involves examining business processes and making substantial changes to how organization currently operates. ABCM is a powerful tool for measuring business performance, determining the cost of business output and is used as a means of identifying opportunities to improve process efficiency and effectiveness.

4. Benchmarking :

Determination of Benchmarking goal statement.

6. Performance measurement :

Many organizations are now focusing on activity performance as a means of facing competitors and managing costs. To monitor efficiency and effectiveness of activities performance measures are required. Activity performance measures consists of measures relating to costs, time, quality and innovation.

Answer 11. (b)

Value Chain Analysis: Value Chain depicts how customer value accumulates along a chain of activities that lead to an end product or service. It is described as the internal processes or activities a company performs to design, produce, market, deliver and support its product.

Value Chain Analysis requires a strategic framework or focus for organizing internal and external information and for summarizing findings and recommendations. It requires a team effort. Management accountants of today has to collaborate with engineering, production, marketing, distribution and service professionals to focus on the strength, weakness, opportunities and threats identified in the value chain analysis results. This helps the firms to better understand which segments, distribution channels, price points, product differentiation, selling propositions will yield them the greatest competitive advantage. The analysis involves the following steps :

(a) Internal cost analysis – to determine the sources of profitability and relative cost positions of internal value-creating processes.

(b) Internal differentiation analysis – to understand the sources of differentiation within internal value creating processes.

(c) Vertical linkage analysis – to understand the relationship and associated costs among external suppliers and customers in order to maximize the value delivered to customers and to minimize cost.

Q. 12. Company produces 4 products P, Q, R, S. The data relating to production activity are as under :—

Product	Quantity of Production	Material cost per unit (Rs)	Direct Lab hrs/unit	Machine hours per unit	Direct Labour Cost per unit (Rs)
P	1000	10	1	0.5	6
Q	10000	10	1	0.5	6
R	1200	32	4	2	24
S	14000	34	3	3	18

Production Overhead as under	Rs.
(i) Overheads applicable to machine oriented activity	1,49,700
(ii) Overheads relating to ordering material	7680
(iii) Set up Costs	17,400
(iv) Administration overheads for spare parts	34,380
(v) Material Handling Cost	30,294

The following further information have been compiled.

Product	No of set up	No of material orders	No of times materials handled	No of Spare Parts
P	3	3	6	6
Q	18	12	30	15
R	5	3	9	3
S	24	12	36	12

Required :

(i) Select a suitable cost driver for each item of overhead expense and calculate the cost per unit of cost driver.

(ii) Using the concept of activity based costing, compute the factory cost per unit of each product.

Answer 12.

Computation of Cost Driver Rates

Production Overhead	Cost Driver	Cost Driver Rates
Overheads applicable to machine oriented activity	Machine Hour Rate	149700/*49900 = Rs. 3 per hour
Overheads relating to ordering material	No of Material Order	7680/30 = Rs. 256 per order
Set up Costs	No of set up	17400/50 = Rs. 348 per set up
Administration overheads for spare parts	No of Spare Parts	34380/36 = Rs. 955per spare part
Material Handling Cost handling	No of times materials handled	30294/81=Rs. 374 per material

*Machine hours=1000*0.5+10000*0.5+1200*2+14000*3

	P		Q		R		S	
Material			10.00		10.00	32		34
Labour			6.00		6.00	24		18
Overheads machine oriented activity		1.50		1.50		6.00	9.00	
Ordering of material	0.768		0.31		0.64		0.22	
Set up Costs	1.044		0.63		1.45		0.60	
Administration overheads for spare parts	5.730		1.43		2.39		0.82	
Material Handling Cost	2.244	11.29	1.12	4.99	2.81	13.29	0.96	11.60
Factory Cost		27.29		20.99		69.29		63.60

Q. 13. E Ltd. manufactures and sells a single product X WHOSR PRICE IS Rs. 40 per unit and variable cost is Rs. 16 per unit.

(a) If the fixed cost for this tear are Rs. 4,80,000 and the annual sales are at 60% margin of safety, calculate the rate of net return on sales,assuming income tax level of 40%.

(b) For the next year, it is proposed to another product line Y whose selling price would be Rs. 50 per unit and the variabli ost Rs. 10 per unit. The total fixed cost are estimated at Rs. 6,66,600. The sales mix of X:Y would be 7:3. At what level of sales next year, would E ltd Break even? Give separately for both X and Y THE BREAK EVEN SALES IN RUPEES AND QUANTITIES.

Answer 13. (a)

Statement showing computation of Profit on X

Selling Price = Rs. 40

Variable Cost = Rs. 16

Contribution = Rs. 24

P/V Ratio = $\frac{\text{Contribution}}{\text{Sales}} \times 100$ = 24/40 * 100 = 60%

BES = FC/P.V Ratio

= 480,000/60%

= Rs. 8,00,000

Let X be Total Sales

0.6X = X–8,00,000

X = Rs. 20,00,000

No of UNITS = 800,000/40 = 50,000 units

Sales	Rs	20,00,000
Less Variable Cost	Rs	8,00,000
Contribution	Rs	12,00,000
Fixed Cost	Rs	4,80,000
Profit	Rs	7,20,000
Tax (720000*40%)	Rs	2,88,000
Net Profit	Rs	4,32,000

Answer 13. (b)

Let the break even units of Product X & Y be 7a & 3a respectively

In order to break even the contribution must be equal to Fixed Cost

7a*24+3a*40 = 6,66,000

a = 2314.58

BES of X = 7a*SP = Rs. 648080

BES of Y = 3a*SP = Rs. 347200

Q. 14. S Ltd engaged in manufacturing activities. It has received a request from one of its important customers to supply a product which will require conversion of Material M, which is a non moving item. The following details are available :

Book Value of Material M	**Rs. 60**
Realizable value of Material M	**Rs. 80**
Replacement Cost of Material M	**Rs. 100**

It is estimated that conversion of one unit of M into one unit of finished product will require one unit of labour hour. At present labour is paid @Rs. 20 per hour. Other costs are as follows :

Out of Pocket Expenses	**Rs. 30 per unit**
Allocated Overheads	**Rs. 10 per unit**

The lobour will be re-deployed from other activities. It is estimated that the temporary redeployment will not result in loss of contribution.The employees to be redeployed are permanent employees of the Co.

Estimate the minimum price to be charged from the customer so that the company is not worse off by executing the order.

Answer 14.

Statement Showing Minimum price to be charged based on Relevant Cost +

Particulars	**Nature & Computtation** **Rs.**	
Material M	Slow moving material.Realizable value is relevant as opportunity cost	80.00
Labour Cost	The workers are permanent employees. Assume no retrenchment policies exist. Committed Cost are not relevant	Nil
Out of Pocket Expenses	Specially Incurred. Hence relevant	30.00
Allocated Overhead	Allocation are not specifically incurred. Hence irrelevant	Nil
	Minimum Price to be charged	**110**

Q. 15. (a) "Purpose of Sensitivity Analysis is to identify the critical variable in the project analysis." — Discuss.

(b) What are the major components of Balanced Score Card?

Answer 15. (a)

In management accounting parlance, all quantitative and financial figures are best estimates, made on the basis of experience and of the study of macro-economic factors and industry-specific matters. In actual practice, while executing the project, all factors are subject to variation.

Sensitivity Analysis is one of the objective methods to ascertain the impact on final probability by taking specific changes in each critical factor variable. Thus if a company is to operate in a highly competitive market, with many rivals, Sales volumes and Price will be critical variables and hence, one would like to assess how sensitive the project is to changes in Sales volume and price.

Sensitive Analysis, when applied to a capital project, will allow the margin of error in various parameters of a project which can be allowed before the project ceases to be profitable. Sensitivity Analysis does not directly measure risk and it is limited by being able to examine the effect of a change in one variable while the others, remaining constant, are unlikely occurrence in practice.

Answer 15. (b)

1. A well designed Balanced Score Card combines financial measures of past performance with measures of the Firm's drivers of future performance.
2. The specific objectives and measures of a Firm's BSC are derived from the Firm's vision and strategy.
3. Generally, the BSC has the following perspectives from which a Company's activity can be evaluated.
   - **(a) Customer perspective i.e., How customers see us?** In order to translate effective internal processes into organizational success, customers/clients must be happy with the service they receive. The Customer perspective considers the business through the eyes of the customers, measuring and reflecting upon customer satisfaction.
   - **(b) Internal business perspective i.e., in what processes must the Firm excel?** The Internal perspective focuses attention on the performance of the key internal processes, which drive the business. The nature of the processes is dependent on the nature of the organization.
   - **(c) Innovation and learning perspective i.e. Can we continue to improve and create value?** The learning and Growth perspective is a measure of potential future performance – it directs attention to the basis of all future success – the organization's people and infrastructure. Adequate investment in these areas is critical to all long term success.
   - **(d) Financial perspective i.e., How we look to our shareholders?** The Financial perspective measures the results that the organization delivers to its stakeholders.

Q. 16. B Ltd manufactures two types of bags-L & T Both bags are produced on the same equipment and use similar processes. The following budgeted data has been obtained for the year ended 31st December 2009.

Product	**L**	**T**
Production Quantity	**25,000**	**2,500**
Number of Purchase Orders	**400**	**200**
Number of Set ups	**150**	**100**
Resources required per unit		
Direct Material (Rs.)	**25**	**62.5**
Direct Labour (hours)	**10**	**10**
Machine Time (hours)	**5**	**5**

Budgeted Production overheads for the year have been analyzed as follows :

	Rs.
Volume Related Overheads	**2,75,000**
Purchase Related Overheads	**3,00,000**
Set up Related Overheads	**5,25,000**

The budgeted wage rate is Rs 20/- per hour.

The cos present system is to absorb overheads by product units using rates per labour hour.

However, the company is considering implementing a system of activity based costing. An activity baseinvestigation revealed that the cost drivers for the overhead costs are as follows :

Volume Related Overhead	**Machine Hours**
Purchase Related Overhead	**No of Purchase Orders**
Set up related Overheads	**No of Set ups**

Calculate the unit cost for each type of bag using :

(i) The current absorption Costing method

(ii) The proposed activity based costing approach

Compare your results and briefly comment on your findings.

Answer 16.

	L	T	Total
Production Quantity	25,000	2,500	
Direct Labour hours required	250,000	25,000	2,75,000
Total Production Overhead			Rs. 1,1,00,000
Overhead absorption rate per labour hour			Rs. 4.00
Machine hours required	1,25,000	12,500	1,37,500
Total Puchase Order	400	200	600
Total Set ups	150	100	250

Cost per cost driver	
Volume Related Overheads	Rs. 2,75,000
Machine hours required	Rs. 1,37,500
Volume related overheads/machine hour	Rs. 2.00
Purchase related overhead	Rs. 3,00,000
Total Purchase orders	600
Purchase related overheads/order	Rs. 500
Set ups related overheads	Rs. 5,25,000
Total Set ups	250
Set up related overheads per set up	Rs. 2,100

(a) (i) Unit cost using existing overhead absorption rate :

Product	**L Rs.**	**T Rs.**
D. Material	25.00	62.50
D. Labour Cost	200.00	200.00
Overheads (10 lab hrs. * Rs. 4)	40.00	40.00
	265.00	302.50

(a) (ii)

Product	**L Rs.**	**T Rs.**	
D.Material	25.00	62.50	
D.labour Cost	200.00	200.00	
Overheads			
Volume Related			
(Rs. 2 per machine hour)	10.00	10.00	
Purchase Related			
(Rs. 500 * 400 orders / 25000)	8.00	40.00	(Rs. 500*200/2500)
Set up related			
(Rs.2100 *150 set ups / 25000)	12.60	84.00	(Rs. 2100*100/2500)
	255.60	396.50	

(b)

Cost pu traditional method	Rs. 265.00	Rs. 302.50
Cost pu ABC	Rs. 255.60	Rs. 396.50
Difference	9.40	-94.00
% change	3.55%	31.07%

The ABC approach attributes the cost of resources to each product which those rsources on a more appropriate are basis than the traditional absorption costing method.the price of the T should be reviewed in the light of the new unit cost.

Q. 17. AB Cycles Ltd has 2 divisions, A and B which manufacture bicycle. Division A produces the bicycle frame and Division B assembles rest of the bicycle on the frame. There is a market for both the sub-assembly and the final product. Each division has been treated as a profit center. The Transfer Price for the sub-assembly has been set at the long run average market price. The following data are available to each division –

Estimated Selling Price for final product	**Rs. 3,000 p.u.**
Long run average Market Price for sub-assembly	**Rs. 2,000 p.u.**
Incremental costs of completion sub-assembly in Division B	**Rs. 1,500 p.u.**
Incremental costs in Division A	**Rs. 1,200 p.u.**

Required:

1. **If division A's maximum capacity is 1,000 units per month and sales to the intermediate market are now 800 units. Should 200 units be transferred to Division B at the long run average price basis?**
2. **What would be the Transfer Price, if the manager of Division b should be kept motivated?**
3. **If outside market increases to 1,000 units, should Division A continue to transfer 200 units to Division B or sell entire production to outside market?**

Answer 17.

1. When External Sales = 800 units
   (a) Since External Sales of Sub-Assembly by Division A is only 800 units, there is a spare capacity of 200 units, which does not involve any opportunity costs.
   (b) Cost of Final Product from Company angle = Variable Costs of A + Variable Costs of B = Rs. 1,200 + Rs. 1,500 = Rs. 2,700 p.u. Since Final Selling Price (Rs. 3,000) is above cost (Rs. 2,700), there is a net contribution of Rs. 300 p.u. of the Final product. Hence, 200 units may be transferred by Division A.
2. Range of Transfer Prices will be as under -
   (a) Minimum TP (from Division A viewpoint) = Variable Costs only = Rs. 1,200.
   (b) Maximum TP (from Division B viewpoint) = Least of – (i) Mkt Price of sub-assembly [or] (ii) Ability to pay = Rs. 2,000 [or] (Rs. 3,000 - Rs. 1,500) = Rs. 1,500.
   (c) A Transfer Price in the range of Rs. 1,200 to Rs. 1,500 will be agreeable to both Managers.
3. When External Sales = 1,000 units
   (a) If External Sales by Division A increases to 1,000 units, internal transfer would involve any opportunity costs. Hence relevant cost of internal transfer = Variable Costs Rs. 1,200 + Opportunity Costs Rs.800 (being foregone on external sales) = Rs. 2,000
   (b) Cost of Final Product from Company angle = Relevant Costs of A + Relevant Costs of B = Rs. 2,000 + Rs. 1,500 = Rs. 3,500 p.u. Since Final Selling Price (Rs. 3,500) is below relevant cost (Rs.3,500), there is a net loss of Rs.500 p.u. of the Final product. Hence, internal transfers are not worthwhile. Division A has to sell the entire output of 1,000 units to the outside market only.

Q. 18. A Company manufactures a single product, which requires two components. The Company purchases one of the components from two suppliers: X Ltd and Y Ltd. The price quoted by X Ltd. is Rs. 180 per hundred units of the components and it is found that on an average 3% of the total receipt from this supplier is defective. The corresponding quotation from Y Ltd. is Rs. 174 per hundred units, but the defective would go up to 5%. If the defectives are not detected, they are utilized in production causing a damage of Rs. 180 per 100 units of the component.

The Company intends to introduce a system of inspection for the components on receipt. The inspection cost is estimated at Rs. 24 per 100units of the component. Such as inspection will be able to detect only 90% of the defective components received. No payment will be made for components found to be defective in inspection.

1. **Advise whether inspection at the point of receipt is justified?**
2. **Which of the 2 Suppliers should be asked to supply? Assume total requirement is 10,000 units of the component.**

Answer 18.

1. Computation of Cost per 100 units of good components without inspection

Particulars	X Ltd	Y Ltd
Purchase Price	Rs. 180×(10,000 ÷ 100) = 18,000	Rs. 174×(10,000÷100) = 17,400
Add: Production Damage	(18,000 × 3%) = 540	(17,400 x 5%) = 870
Total Costs	Rs. 18,540	Rs. 18,270
Number of good components	(10,000 – 300) = 9,700 units	(10,000 – 500) = 9,500 units
Cost per 100 good component	18,540 ÷ 9,700 = Rs.191.13	18,300 ÷ 9,500 = Rs.192.31

2. Computation of Cost per 100 units of good components with inspection.

Particulars	X Ltd	Y Ltd
(a) Total Units Required	10,000 units	10,000 units
(b) Defective Units	3% of 10,000 = 300 units	5% of 10,000 = 500 units
(c) Defectives no detected (10%)	30 units	50 units
(d) Defectives Detected	270 units	450 units
(e) Components paid for (a) – (d)	9,730 units	9,550 units
(f) Purchase Price	(9,730 × 180) ÷ 100 = 17,514	(9,550 × 174) ÷ 100 = 16,617
(g) Inspection Cost	(10,000 × 24) ÷ 100 = 2,400	(10,000 × 24) ÷ 100 = 2400
(h) Production Damage	(30 × 180) ÷ 100 = 54	(50 × 174) ÷ 100 = 87
(i) Total Costs (f +g + h)	19,968	19,104
(j) Cost per 100 good components	(19,968 ÷ 9,700) × 100 = 205.86	(19,104 ÷ 9,500) × 100 = 201.09

Conclusion:

1. Inspection at the point of receipt is not advantageous as there is an additional cost per 100 good components Rs.14.73 in case of X Ltd. and Rs.8.78 in case of Y Ltd.
2. Purchase from X Ltd is cheaper, as there is cost saving of Rs.1.18 per 100 good components.

Q. 19. (a) What is lean manufacturing? Briefly describe the lean/JIT system.

(b) Explain how adoption of JIT affects profitability of an organization.

Answer 19. (a)

Just in time (JIT) philosophy was first developed in Japan. Toyota introduced it in 50's and later, other companies in Japan have adopted it.

The overriding feature of JIT is that materials or parts are generated in the exact quantity required and just at the time they are needed. A classic JIT system consists of a series of manufacturing units each delivering to one another in successive stages of production. The amount delivered by each unit to the next unit is exactly what the needs for the next production period (usually one day). There are no safety margins in the form of buffer stock, live storage or work-in-progress. JIT is a sophisticated approach in eliminating wastage in the process of manufacturing in different stages, say, from the production design stage to the stage of delivery of finished product. JIT is sometimes regarded as an inventory control technique or a purchasing method. It aims at eliminating all activities which do not add 'value' to the product.

JIT seeks to achieve the following goals :

- Elimination of non value added activities
- Zero inventory
- Zero defects
- Batch size of one
- Zero Breakdown
- A 100% on time delivery service

Schonberger defines JIT as being 'to produce and deliver finished goods just in time to be sold, sub assemblies just in time to be assembled into finished goods, fabricated parts just in time to go into sub assemblies and purchased materials just in time to be transformed into fabricated parts'.

Answer 19. (b)

The introduction of a JIT system can be expected to affect profit as follows :

- There will be a reduction in inventory holding costs since inventories of raw materials and finished goods will be eliminated.
- There will probably be an increase in the price paid for raw materials to compensate the supplier for the additional flexibility that they are required to offer.
- There may be cost increase as a result of peaks and troughs of demand which cause fluctuating production levels and results in high labour costs through overtime.
- More management time may be spent on planning the resource utilization rather than on making strategic decisions to improve the profitability.

Q. 20. ABC Ltd produces three products X, Y & Z. The capacity of ABC'S plant is restricted by process alpha. Process alpha is expected to be operation for 8 hours per day and can produce 1200 units of X per hour, 1500 units of Y per hour and 600 units of Z per hour.

Selling Price and material cost for each product are as follows :

Product	Selling Price (Rs per unit)	Material Cost (Rs per unit)	Throughput Contribution (Rs per unit)
X	150	70	80
Y	120	40	80
Z	300	100	200

Conversion Cost are Rs. 7,20,000 per day.

(a) Calculate the profit per day if daily output achieved is 6000 units of X, 4500 units of Y and 1200 units of Z.

(b) Derermine the efficiency of the bottleneck process given the output in (a)

(c) Calculate the TA RATIO FOR EACH PRODUCT

Answer 20.

(a) Profit per day = Throughput Contribution-Conversion Cost

= Rs. [(80 × 6000) + (80 × 4500) + (200 × 1200) – Rs. 7,20,000

= Rs. 3,60,000

(b)

Product	Minutes in alpha per unit	Minutes in alpha per day
X	$\frac{60}{1200} = 0.05$	6000 × 0.05 = 300
Y	$\frac{60}{1500} = 0.04$	4500 × 0.04 = 180
Z	$\frac{60}{600} = 0.1$	1200 × 0.1 = 120
		600

Total Hours = $\frac{600}{60}$ =10 hours

Hours available = 8

Hours Produced = 10

Efficiency = 125%

(c) TA Ratio = Throughput Contribution per factory hour/conversion cost per factory hr.

Where conversion cost per hour = Rs. 7,20,000/8 = Rs. 90,000.

Product	Throughput Contribution	Cost Per factory hour (Rs.)	TA Ratio Per factory hour (Rs.)
X	80 × 60/0.05 = 96,000	90,000	$\frac{96000}{90000}$ = 1.07
Y	80 × 60/0.04 = 120,000	90,000	$\frac{120000}{90000}$ = 1.33
Z	200 × 60/0.1 = 120,000	90,000	$\frac{120000}{90000}$ = 1.33

Q. 21. (a) The operating results of a department provide the following information for a particular week:

Average output per week	**48,000 units**
Saleable value of output	**Rs. 60, 000**
Contribution on above	**Rs. 24, 000**

The management is contemplating to bring about more mechanization in the department at a capital cost of Rs. 16, 000 which will result in reduction in number of workmen from the present strength of 160 nos. to 120 nos. However, due to mechanical help, the output of individual workmen will increase by 60%. The existing piece rate is Re. 0.10 per article and as an incentive; the management propose to increase the existing piece rate by 5% for every 10% increase in the individual output achieved. There will be a reduction in sale price by 4% to sell the increased production.

You are required to calculate extra weekly contribution resulting due to proposed changes.

(b) In what circumstances is a company justified in selling its products at a price below variable cost?

Answer 21. (a)

Working :

		Rs.
(i)	Sales per week	60,000
	Contribution	24,000
	Variable cost	36,000
	Less wages (0.10×48000pc)	4,800
	Variable cost excluding wages	31,200

i.e. 31,200/48,000 = Re 0.65 per pc

(ii) Future expected production

	units/employee
Production per employee = 48,000/160 =	300
Add increase by 60%	180
	480

Total future production from 120 workmen = 57,600.

(iii) Expected selling price

	Rs.
Present price	Rs. 60,000/48,000 = 1.25
Less reduction by 4%	= 0.05
Revised price	1.20

(iv) Revised piece rate wages

	Rs.
Present rate	0.10
Incentive	0.03
(5% × 60% =3%)	0.13

(v) Forecast of profitability

	Rs.	Rs.
Sales (57600 units × Re 1.20)		69,120
Less : Variable cost		
Wages @ Re 0.13	7,488	
Other overheads		
(excluding wages @ Re 0.65)	37,440	44,928
Contribution		24,192
Present contribution		24,000
Increase in contribution		192

Answer 21. (b)

A company is justified in selling its product below the variable cost in the following circumstances :

(i) Where the product is of perishable nature

(ii) Where heavy stocks have been accumulated.

(iii) Where it is decided to use the product as loss leader i.e. to boost the sales of other products

(iv) Where the product is intended to be popularized by an introductory/temporary offer

(v) Where it is intended to be an entry barrier to the would-be competitor

(vi) Where it is to serve some social purpose.

Q. 22. A Company makes 1,500 units of a product for which the Profitability Statement is given below –

Particulars	Rs.	Rs.
Sales		**1,20,000**
Direct Materials	**30,000**	
Direct Labour	**36,000**	
Variable OH	**15,000**	
Sub-Total Variable Costs		**81,000**
Fixed Costs		**16,800**
Total Cost		**97,800**
Profit		**22,200**

After the first 500 units of production, the Company has to pay a premium of Rs. 6 per unit towards overtime labour.

The premium so paid has been included in the Direct Labour Cost of Rs. 36,000 given above. You are required to compute the Break-Even Point.

Answer 22.

OT Premium for 1,000 units = Rs.6 × 1000 = Rs. 6,000.

Normal Labour Cost for 1,500 units = Rs. 36,000 – Rs. 6,000 = Rs. 30,000.

So, Labour Cost p.u. = Rs. 20.

Particulars	Upto 500 units	Beyond 500 units
Selling Price per unit (1,20,000 ÷ 1,500)	80.00	80.00
Less : Direct Material Cost per unit (30,000 ÷ 1,500)	20.00	20.00
Direct Labour Cost per unit (See Note above)	20.00	20.00
OT Labour per unit (Given)	–	6.00
Variable OH per unit (15,000 ÷ 1,500)	10.00	10.00
Total Variable Cost per unit	50.00	56.00
Contribution per unit	30.00	24.00

Contribution of BEQ :

Maximum Contribution from 500 units (500 units × Rs.30)	Rs. 15,000
Less : Fixed Cost at this level	Rs. 16,800
Balance Unrecovered Fixed Costs	Rs. 1,800
Rate of Contribution (more than 500 units)	Rs. 24 p.u.
Additional Quantity to recover this Fixed Cost	1,800 ÷ 24 = 75 units
Therefore, BEQ	500 + 75 = 575 units

Q. 23. X ltd.is considering the purchase of a new computer controlled packing machine to replace the two machines which are currently used to pack product y. The new machine would result in reduced labour costs because of more automated nature of the process and in addition, would permit production levels to be increased by creating greater capacity at the packing stage. With an anticipated rise in the demand for product y, it has been estimated that the new machine will lead to increased profits in each of the next three years. Due to uncertainty in demand, however, the annual cash flows (including savings) resulting from purchase of the new machine cannot be fixed with certainty and have therefore been estimated probabilistically as follows :

Annual Cash Flows (Rs. '000)

Year 1	Prob.	Year 2	Prob.	Year 3	Prob.
10	0.3	10	0.1	10	0.3
15	0.4	20	0.2	20	0.5
20	0.3	30	0.4	30	0.2
	40	0.3			

Because of the overall uncertainty in the sales of product y, it has been decided that only 3 years cash flows will be considered in deciding whether to purchase the new machine. After allowing for the scrap value of the existing machines, the net cost of the new machine will be Rs.42,000. ignore tax.

Required :

(i) Ignoring time value of money, identify which combinations of annual cash flows will lead to an overall negative net cash flow and determine the total probability of this occurring.

(ii) On the basis of the average cash flow for each year, calculate the net present value of the new machine, given company's cost of capital is 15% and the present value of Re.1 at 15% discount rate are as follows :

Year	1	2	3	4	5
P. V	0.8696	0.7561	0.6575	0.5718	0.4972

Answer 23.

If the total cash flow in years 1,2 and 3 is less than Rs. 42,000, the net cash flow will be negative.

(i) The combination of cash flow which total less than Rs.42,000 are given below :

Year 1	Year 2	Year 3	Year 4	Jt. Probability of combination
10	10	10	30	0.3 × 0.1 × 0.3 = 0.009
10	10	20	40	0.3 × 0.1 × 0.5 = 0.015
10	20	10	40	0.3 × 0.2 × 0.3 = 0.018
15	10	10	35	0.4 × 0.1 × 0.3 = 0.012
20	10	10	40	0.3 × 0.1 × 0.3 = 0.009
				Total 0.063

The probability of a negative cash flow is 0.063.

(ii) Expected cash flow.

Year 1	Expected cash flow =	10 × 0.3 + 15 × 0.4 + 20 × 0.3	= 15(000)
Year 2	Expected cash flow =	10 × 0.1 + 20 × 0.2 + 30 × 0.4 + 40 × 0.3	= 29(000)
Year 3	Expected cash flow =	10 × 0.3 + 20 × 0.5 + 30 × 0.2	= 19(000)

Present cash flow = 15 × 0.8696 + 29 × 0.7561 + 19 × 0.6575 = 47.4634 (Rs. 000)

The NPV of the new machine = Rs. (47463 – 42000) = Rs. 5463

Q. 24. A manufacturing Company has an installed capacity of 1,50,000 units p.a. Its cost structure is given below –

Variable Costs	**Rs. 10 per unit**
Labour (Minimum Rs.1,00,000 per month)	**Rs. 10 per unit**
Overheads	**Rs. 4 per unit**
Fixed Overheads	**Rs. 1,92,300 per annum.**

Semi-Variable overheads Rs.60,000 per annum at 75% capacity, which increases by Rs.4,000 per annum for every 5% increase in capacity utilization for the year as a whole.

The capacity utilization for the next year is estimated at 75% for three months, 80% for six months and 90% for the remaining part of the year. If the company is planning to have a profit of 20% on the selling price, calculate the selling price per unit.

Answer 24.

1. Production per month = 1,50,000 ÷ 12 = 12500 units
2. Statement of Costs and Revenues for the year

Particulars	**First 3 months**	**Next 6 months**	**Last 3 months**	**Total**
a. Capacity	75%	80%	90%	
b. Production	12500 × 75% × 3 =	12500 × 80% × 6 =	12500 × 90% × 3 =	
	28,125	60,000	33,750	1,21,875
c. Variable Costs at Rs. 10 p.u.	2,81,250	6,00,000	3,37,500	12,18,750
d. Labour at Rs.10 p.u. (min. Rs. 1 Lakh per month)	3,00,000	6,00,000	3,37,500	12,37,500
e. Variable OH at Rs. 4 pu	1,12,500	2,40,000	1,35,000	4,87,500
f. Fixed Overheads (given)				1,92,300
g. Semi-Variable OH (Note 3)	15,000	32,000	18,000	65,000
h. **Total Costs**				**32,01,050**
i. Add : Profit	1/5 on Revenue	= ¼ on Cost		8,00,263
j. **Desired Revenue (h+i)**				**40,01,313**
k. **Selling Price unit (j ÷ b)**				**32.83**

3. Computation of Semi-variable OH :

First 3 months : 75%	Rs. 60,000 × 3/12	=	15,000
Next 6 months : 80%	[Rs. 60,000 + Rs. 4,000] × 6/12	=	32,000
Last 3 months : 90%	[Rs. 60,000 + Rs. 4,000 × 3] × 3/12	=	18,000

Note : In the above calculation, it is presumed that Semi-Variable OH arise uniformly during the year. Alternatively, the following treatment is also permissible –

- Since 90% is reached at some time during the year (i.e.during the last three months), the average SVOH for the entire year = 90% Capacity = Rs. 60,000 + Rs. 4,000 × 3 = Rs.72,000.
- Average Capacity Utilisation during the entire year = 1,21,875 ÷ 1,50,000 units = 81.25%. Hence, SVOH for the entire year = Rs. 60,000 + Rs. 4,000 × 2 = Rs. 68,000.

Q. 25. A review, made by the top management of Sweat and Struggle Ltd. which makes only one product, of the result of the first quarter of the year revealed the following :

Sales in units	**10,000**
Loss	**Rs. 10,000**
Fixed cost (for the year Rs. 1,20,000)	**Rs. 30,000**
Variable cost per unit	**Rs. 8.00**

The Finance Manager who feels perturbed suggests that the company should at least break even in the second quarter with a drive for increased sales. Towards this, the company should introduce better packing which will increase the cost by Rs. 0.50 per unit.

The Sales Manager has an alternative proposal. For the second quarter additional sales promotion expenses a can be increased to the extent of Rs. 5,000 and a profit of Rs. 5,000 can be aimed at during the period with increased sales.

The Production Manager feels otherwise. To improve the demand, the selling price per unit has to be reduced by 3%. As a result the sales volume can be increased to attain a profit level of Rs. 4,000 for the quarter.

The Manager Director asks you as a Cost Accountant to evaluate the three proposals and calculate the additional sales volume that would be required in each case, in order to help him to take a decision.

Answer 25.

Calculation of selling Price

		Rs.
Variable cost	(8 × 10,000)	80,000.00
Add: Fixed cost		30,000.00
Total cost		1,10,000.00
Profit		(10,000.00)
Sales		1,00,000.00
Selling price	(100000/10000)	10.00

Statement showing evaluation of alternatives and the number of units required to attain the targets of respective managers.

	Finance Manager	Sales Manager	Production Manager
(i) Selling price (Rs.)	10.00	10.00	9.70
(ii) Variable cost (Rs.)	8.50	8.00	8.00
(iii) Contribution per unit (Rs.)	1.50	2.00	1.70
(iv) Fixed cost (Rs.)	30,000.00	35,000.00	30,000.00
(v) Target (Rs.)	B.E.P	Profit or Rs. 5000	Profit of Rs. 4000
	(30000/1.5)	(40000/2)	(34000/1.7)
	20,000.00	20,000.00	20,000.00
Additional units required	10,000.00	10,000.00	10,000.00

Q. 26. Hudco Ltd. Requires its various operating divisions to meet the company's target return of 15% on investment, as specified by the board. Besides the ROI of 15% the board also requires an annual positive cash flow. The Steady Division has achieved the 15% target for many years. Steady's assets are mainly plant and equipment (its property rented), plus net current assets. The average age of its assets has increased by 10 months per year over the last four years. A recent benchmarking exercise has shown that Steady's productivity is below that of its competitors, although its financial performance appears very good. The divisional operations director has recently presented a proposal for a major investment in new plant and machinery. He argued that without substantial investment Steady would not be able to compete on either quantity or delivery time. The divisional sales director agreed that these factors had become the two most important features in winning new orders. The budgeted financial figures for 2004 are shown here :

	Steady Division- 2004 (Rs. Cr)
Sales	**168.60**
Operation profit before depreciation	**22.20**
Depreciation	**3.00**
Operating profit	**19.20**
Interest payable	**1.80**
Divisional net profit before tax	**17.40**
Plant and equipment	**60.00**
Net current assets	**36.00**
Total divisional assets	**96.00**

The proposal for new investment would lead to a net increase in plant and equipment of Rs. 36 crore and a reduction in net current assets of Rs. 12 crore. Steady expects that the new assets would lead to an increase in operating profit before depreciation of Rs. 8.4 crore and a net increase in depreciation of Rs. 4.8 crore. Hudco charges 12% on all funds used by divisions.

You are required to-

(a) Calculate the return on investment for Steady Divisions for 2004, with and without the new investment proposal. Briefly comment on the expected performance of Steady Division for each option.

(b) Calculate the Residual Income (RI) for Steady Division for 2004, with or without the new investment proposal. Briefly comment on whether using RI would improve the measurement of Steady's performance.

(c) Outline the major features of Economic Value Added (EVA) and briefly discuss whether its use could improve divisional performance measurement for Hudco.

Answer 26.

(a)

Hudco Ltd. - Steady Division
Return on Investment (ROI)

	Without investment Rs. Cr.		with investment Rs. Cr.
PBIT	19.20	(+ 8.4 – 4.8)	22.80
Total Assets	96.00	(36.00 – 12.00)	120.00
ROI	20%		19%

Comments :

Stedy's return is more than the company's target. However, the information of poor productivity and aged assets makes a discerning accountant wonder if the apparent better result were the products of low asset values rather than production efficiency.

With new additional investment the ROI is reduced. This might discourage the steady manjagement to undertake the proposed investment, though this will mean steady remains a weakling in respect of productivity, quality of goods and service in its market.

This measure, ROI, obstructs a clear vision of the merit of a project at times.

(b)

Residual Income (RI)

	Without investment Rs. Cr.		with investment Rs. Cr.
PBIT	19.20		22.80
Imputed interest charge @ 12% (on 96.00)	(11.52)	(on 120.00)	(14.40)
RI	7.68		8.40

Comments :

As in ROI, RI also shows better results as the imputed interest on older assets gets smaller.

However, the RI measure here will encourage new investment. As against the current return, a target return is decided with a view to long term objective of the corporate management. Sometimes the target rate of return is used as the imputed interest charge; a positive RI in this case will indicate a project that earns in excess of the target ROI. Performance measures must be designed to reward decisions that are optimum for the company as a whole.

(c) **Economic Value Added (EVA)**

EVA, as a measure, follows the same principle as RI. Value addition by a project is measured by EVA. However, this measure looks at the impact on economic value of the business by the project. This requires a procedure which may deviate from the conventional accounting principles. For example, fully written off goodwill, research and development may be reinstated at their economic values with corresponding adjustments to the reported profit. The use of all the assets to generate economic benefits is thus highlighted. The emphasis on measuring value creating in the EVA should encourage managers to make decisions that are compatible with the objectives of the business as a whole.

Indeed, assets are often measured on a current cost basis within the EVA, which will eliminate the misleading benefit that appears to be gained from holding assets for longer than their economic value warrants. Divisional bonus schemes may be based on EVA for motivation of managers, which will attain corporate goal congruence at the same time.

Q. 27. (a) A co manufactures three products.The budgeted quantity,selling prices and unit cost are as under :

Particulars	A	B	C
Raw Materials @ Rs20 per Kg	**80**	**40**	**20**
Direct Wages@ Rs 5 per hour	**5**	**15**	**10**
Variable Overheads	**10**	**30**	**20**
Fixed Overhead	**9**	**22**	**18**
Budgeted Production In inits	**6400**	**3200**	**2400**
Selling Price per unit	**140**	**120**	**90**

(i) Present a statement of budgeted profit

(ii) Set optimal product Mix and determine the profot ,if the supply of Raw material is restricted to 18,400 kgs.

(b) What is matrix organization structure? What are its advantages and disadvantages?

Answer 27. (a)

Calculation of Contribution per unit and Total Fixed Cist

		Products		
		A	B	C
		6400	3200	2400
Selling Price p u	(a)	140	120	90
Variaable Cost p.u :				
Raw Material		80	40	20
Direct Wages		5	15	10
Variable Overheads		10	30	20
Total Variable Cost pu	(b)	95	85	50
Contribution pu	(a)-(b)	45	35	40
Raw material pu		4	2	1
Contribution per kg of raw material		11.25	17.50	40
Ranking		III	II	I
Fixed Overheads pu		9	22	18
Total Fixed Overhead		57,600	70,400	43,200
Total Fixed Overhead = Rs. 1,71,200				

Statement of Budgeted Profit

Particulars	Products			
	A	B	C	Total
No of Units	6,400	3,200	2,400	
Contribution pu (Rs.)	45	35	40	
Total Contribution	2,88,000	1,12000	96,000	4,96,000
Less : Fixed Cost				1,71,200
Profit				3,24,800

Statement of Optimum Pruduct Mix and Prifitability

Particulars	Units Kgs	Raw Material Rs.	Contribution	Total Contribution
Product C	2400	2400	40	96,000
Product B	3200	2400	35	1,12,000
Product A	2400	9600	45	1,08,000
Total Contribution				3,16,000
Less : Fixed Cost				1,71,200
Profit				1,44,800

Answer 27. (b)

Matrix Organisation Structure combines the coordination and control of the decentralized structure with the technical excellence economies of scale of the functional structures to reap the benefits of both. While managing complex programs as in large high-technology programs, complex products and services and multinational business, organization face several coordination problems. A matrix avoids such problems as the total responsibility for achieving the goals and objective of the program lies with Program Manager but must share resources from the various functional heads. The functional managers assigned to the projects are administratively reporting to the Project Manager but functionally to the Function Head.

The distinguishing feature of the matrix structure is thus the dual dimensions of management embodied in it. The outputs produced by the organization may be identified in the rows of the matrix while functional inputs utilized by each project may be identified in the columns of the matrix. The total outputs of the functions are found in the last column of the matrix. Though the Project Manager assumes full responsibility for delivery of a product which meets performance specifications he does not have direct authority over the functional organization that actually performs the work. The functional personnel thus operate under the knowledge-based authority of the function and the resource-based authority of the Project Manager. This may create a friction in the course of the work but it is up to the Project Manager to use it as a creative friction to further the goals of the program.

The matrix organization structure is suitable for projects which are not large enough to warrant a fully decentralized set-up, with all functional managers under each project. Decentralization may result in loss of scale economics, by way of duplication of functional services for several projects. The matrix structure is suitable for projects of short duration.

Advantages :

(a) Ensures better coordination and control of the decentralized structure along with achieving technical excellence and economies of scale of the functional organization,

(b) Fosters creativity and multiple sources of diversity,

(c) Broader middle-management exposure to strategic issues of the business,

(d) Acts as a good training ground for future leaders.

Disadvantages :

(a) Dual accountability as explained above, which may create confusion,

(b) Necessitates tremendous horizontal and vertical coordination,

(c) Difference in orientation between Program and Functional personnel. The functional person may aim for high technical performance not warranted by project requirement,

(d) Diffuse responsibility - as responsibility is distributed between program and functional personnel becomes difficult to administer system of accountability, leading to potential conflict,

(e) Program personnel may have a sense of insecurity as soon as a project is completed and this may lower their morale,

(f) The design of the reward structure for program and functional personnel is a ticklish issue which should be worked out in a fair and transparent manner to satisfy all.

Q. 28. Write Short Notes on :

(a) Value Analysis

(b) Supply Chain Management

(c) Decision Tree

(d) Theory of Constraint

(e) Balance Score Card

(f) Value Chain Management

Answer 28. (a)

Value Analysis defines a basic function as anything that makes the products work or sell. A function that is defined as basic control change. Secondary functions, also called supporting functions, described the manner in which basic functions were implemented. Secondary function could be modified or eliminated to reduce product cost. The term value has four different meanings: Cost Value, use value, esteem value and exchange value. The first step in the value analysis process is to define the problem and its scope. Once this is done , the functions of the product and its items are derived. These functions are basic and secondary functions. A cost function matrix or value analysis matrix is prepared.. Improvement Opportunities are then brainstormed, analysed and selected.

Answer 28. (b)

Supply Chain Management- Supply Chain Management encompasses the planning and management of all activities involved in sourcing, procurement,conversion and logistics management activities. Supply Chain Management integrates supply and demand management within and across companies.

Five basic components of supply Chain Management are :

- Plan-Develop a strategy for managing all resources that go towards meeting customer demand.
- Source-Choose the supplier
- Make-Schedule activities for Production.
- Deliver- Coordinate receipt of order to delivery
- Return-Receive Defectives and excess

Answer 28. (c)

Decision Tree-Decision Tree is a tool which helps to choose between several courses of action. It provides a highly effective structure within which options can be laid out and the possible outcomes of choosing those options can be investigated. It also helps to form a balanced picture of the risks and rewards associated with each possible course of action.

Answer 28. (d)

Theory of Constraint :

It describes methods to maximize operating income when faced with some bottleneck and some non-bottleneck operations. It defines three measuremnts:

(a) Throughput contribution, equal to sales revenue minus direct materials cost.

(b) Investments (inventory), equal to the sum of materials cost of direct materials inventory, W.I.P inventory and finished good inventory; R & D costs and costs of equipment and buildings.

(c) Operating costs, equal to all operating costs (other than direct materials) incurred to earn throughput contribution. Operating costs include salaries and wages, rent, utilities and depreciation.

Increasing throughput and / or decreasing inventory or operating expenses should lead to the accomplishment of the firm's goal; to make money now and in future as well. Anything that prevents a firm from reaching this goal is labeled as a constraint (in the form of capacity, material, the market (demand), behaviour or even management policy).

Theory of Constraint thinking regards all progress toward the goal of making money as relating directly to management attention toward the constraint(s).

The five focusing steps are a tool developed to help systems deal with constraints: Step (i) Identify the system's constraints,

Step (ii) Decide how to exploit the system's constraints,

Step (iii) Subordinate everything else to the decisions made in step (ii), Step (iv) Elevate the system's constraints,

Step (v) If a constraint is broken in step (iv), go back to step (i), but do not allow inertia to cause a new constraints

Answer 28. (e)

Balanced Score Card :

Balanced Score Card is a performance management and strategy development methodology that helps executives translate on organization's mission statement and overall business strategy into specific, qualifiable goals and monitors the organization's performance in terms of these goals. Balanced Score Card also aligns budgets to strategy and helps in developing an enterprise performance management system.

It is a set of financial and non-financial measures relating to company's critical success factors. As a management tool it helps companies to assess overall performance, improve operational processes and enable management to develop better plans for improvements. It offer managers a balanced view of their organization upon which they can base real change.

Balanced Score Card has the following four perspectives :

(a) Customer perspective:

To achieve the company's vision and strategy how should the company appear its customer?

(b) Internal busines performance:

To satisfy the company's sharehloders and customers and what business processes must the company excel?

(c) Learning and growth perspective:

To achieve the vision, how will the company sustain its ability to change and imrpove?

(d) Financial perspective:

To succeed financially how should the company appear to the company's share holders?

Answer 28. (f)

Value Chain Management :

Value chain management (VCM) is a solution for smoothening the interaction between all partners of an enterprise, suppliers, dealers, bankers etc. VCM goes beyond supply chain management to bring synergy between business partner by way of providing business and knowledge information in the effective manner to help achieve business targets. There are three kinds of partners among whom a company try to build synergy.

- One is the normal supply chain management partners – suppliers, suppliers to suppliers, dealers, customers etc.
- The second important partner category is the transporter who transports raw material and finished goods. The transporters play an important role in value chain.

The third important category of partners are service providers and banks.

Q. 29. Write Short Notes on :

(i) Zero Defects and Right First Time-Philip Crosby

(ii) Enterprise Risk Management

(iii) Aggregate Planning

(iv) ERP

(v) Management Control System

(vi) Quality Function Deployment

Answer 29.

(i) 'Zero Defects' & "Right First Time" - Philip Crosby :

Philip Crosby prompted the phrases, "Zero Defects" does not mean mistakes never happen, rather than there is no allowable number of errors built into a product or process and that it is to be got right first time. He believes that management should take prime responsibility for quality and worker only follow their managers' example.

His four absolute quality management criteria are :

(i) Quality is conformance to requirements,

(ii) Quality prevention is preferable to quality inspection,

(iii) Zero defects is the quality performance standard,

(iv) Quality is measured in monetary terms—the price of non-conformance.

Steps to quality improvement :

Committed to quality,

Creation of quality improvement teams representing all the departments,

Measure processes to determine current and potential quality issues,

Calculate cost of (poor) quality,

Raise quality awareness of all employees, Take action to correct quality issues, Monitor progress of quality improvement, Train supervisors in quality improvement, Hold "Zero Defects" days,

Encourage employees to create their own quality improvement goals,

Encourage employee communication with management about obstacles to quality, Recognize participants' effort,

Create quality councils,

Do it all over again — quality improvement does not end.

(ii) Enterprise Risk Management :

As the field of risk management expanded to include managing financial, environmental, and technological risks, the role of risk managers grew to encompass an organization-wide approach known as enterprise risk management (ERM). This approach seeks to implement risk awareness and prevention programs throughout a company, thus creating a corporate culture, able to handle the risks associated with a rapidly changing business environment.

Enterprise risk management is a process, effected by an entity's board of directors, management and other personnel. It is being applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives.

The underlying premise of enterprise risk management is that every entity exists to provide value for its stakeholders. All entities face uncertainty, and the challenge for management is to determine how much uncertainty to accept as it strives to grow stakeholder value. Uncertainty presents both risk and opportunity, with the potential to erode or enhance value. Enterprise risk management enables management to effectively deal with uncertainty and associated risk and opportunity, enhancing the capacity to build value.

Value is maximized when management sets strategy and objectives to strike an optimal balance between growth and return goals and related risks, and efficiently and effectively deploys resources in pursuit of the entity's objectives.

(iii) Aggregate planning :

Aggregate planning is an operational activity that does an aggregate plan for the production process, in advance of 2 to 18 months, to give an idea to management as to what quantity of materials and other resources are to be procured and when, so that the total cost of operations of the organization is kept to the minimum over that period.

The quantity of outsourcing, subcontracting of items, overtime of labour, numbers to be hired and fired in each period and the amount of inventory to be held in stock and to be backlogged for each period are decided. All of these activities are done within the framework of the company ethics, policies, and long term commitment to the society, community and the country of operation.

Aggregate planning has certain prerequired inputs which are inevitable. They include :

- Information about the resources and the facilities available.
- **Demand** forecast for the period for which the planning has to be done.
- Cost of various alternatives and resources. This includes cost of holding inventory, ordering cost, cost of production through various production alternatives like subcontracting, **backordering** and overtime.
- Organizational policies regarding the usage of above alternatives.

"Aggregate Planning is concerned with matching supply and demand of output over the medium time range, up to approximately 12 months into the future. Term aggregate implies that the planning is done for a single overall measure of output or, at the most, a few aggregated product categories. The aim of aggregate planning is to set overall output levels in the near to medium future in the face of fluctuating or uncertain demands.

The following procedure is generally adopted in the process of aggregate planning —

- Determine Demand for each period
- Determine Capacity for each period
- Identify company,departmental and union policy
- Determine Unit cost of production
- Develop alternative Plans
- If satisfactory plans emerge, select the one that best satisfies the objective.

(iv) ERP :

Enterprise resource planning (ERP) refers to a computer information system that integrates all the business activities and processes throughout an entire organization. ERP systems incorporate many of the features available in other types of manufacturing programs, such as project management, supplier management, product data management, and scheduling. The objective of ERP is to provide seamless, real-time information to all employees throughout the enterprise. Companies commonly use ERP systems to communicate the progress of orders and projects throughout the supply chain, and to track the costs and availability of value-added services.

ERP systems offer companies the potential to streamline operations, eliminate overlap and bottle-necks, and save money and resources. But ERP systems are very expensive and time-consuming to implement, and surveys have shown that not all companies achieve the desired benefits. According to the online business resource Darwin Executive Guides, it is "a tall order, building a single software program that serves the needs of people in fi nance as well as it does the people in human resources and the warehouse... To do ERP right, the ways you do business will need to change and the ways people do their jobs will need to change too. And that kind of change doesn't come without pain."

(v) Management Control System :

oseph Maciariello & Calvin Kirby have defined M.C.S. as follows MCS is a set of inter-related communication structures that facilitates the processing of information for the purpose of assisting managers in coordinating the parts and attaining the purpose of an organization on a continuous basis.

They view "the entire organization as a control system. 'Control' is seen as a characteristic of a control system; it occurs when the organization is attaining its purpose. Purpose and attainment of purpose are central to the work of control system."

Purposes of MCS, according to them are :

1. Coordination of parts of organization
2. Steering those parts to achieve organizational goals.
3. Bring along unity out of the diverse activities of an organization.

(vi) Quality Function Deployment :

Quality Function Deployment (QFD) is a structured approach to defining customer needs or requirements and translating them into specific plans to produce products to meet those needs. The "voice of the customer" is the term to describe these stated and unstated customer needs or requirements. The voice of the customer is captured in a variety of ways : direct discussion or interviews, surveys, focus groups, customer specifications, observation, warranty data, field reports, etc. This understanding of the customer needs is then summarized in a product planning matrix or "house of quality". These matrices are used to translate higher level "what's" or needs into lower level "how's" — product requirements or technical characteristics to satisfy these needs.

While the Quality Function Deployment matrices are a good communication tool at each step in the process, the matrices are the means and not the end. The real value is in the process of communicating and decision-making with QFD. QFD is oriented toward involving a team of people representing the various functional departments that have involvement in product development: Marketing, Design Engineering, Quality Assurance, Manufacturing/ Manufacturing Engineering, Test Engineering, Finance, Product Support, etc.

The active involvement of these departments can lead to balanced consideration of the requirements or "what's" at each stage of this translation process and provide a mechanism to communicate hidden knowledge - knowledge that is known by one individual or department but may not otherwise be communicated through the organization. The structure of this methodology helps development personnel understand essential requirements, internal capabilities, and constraints and design the product so that everything is in place to achieve the desired outcome - a satisfied customer. Quality Function Deployment helps development personnel maintain a correct focus on true requirements and minimizes misinterpreting customer needs. As a result, QFD is an effective communications and a quality planning tool.

Q. 30. Write Short Notes on :

(a) Distribution Requirement Planning

(b) KAIZEN Costing

(c) Five S Concept

(d) Six Sigma

(e) PDCA

Answer 30. (a)

Systematic process for determining which **goods**, in what **quantity**, at which **location**, and when are **required** in **meeting** anticipated **demand**. This **inventory** related **information** is then entered into a **manufacturing requirements planning** (MRP-I) **system** as **gross** requirements for **estimating input flows** and **production schedules**.

A supply channel is composed of three structures. At one end of the channel is the manufacturer. The manufacturer focuses on the development and production of products and originates the distribution process. The terminal point in the channel is the retailer who sells goods and services directly to the customer for their personal, non-business use. In between the two lies a process called distribution.

Distribution involves a number of activities centered around a physical flow of goods and information. At one time the term distribution applied only to the outbound side of supply chain management, but it now includes both inbound and outbound. Management of the inbound flow involves these elements :

- Material planning and control
- Purchasing
- Receiving
- Physical management of materials via warehousing and storage
- Materials handling

Management of the outbound flow involves these elements :

- Order processing
- Warehousing and storage
- Finished goods management
- Material handling and packaging
- Shipping
- Transportation

Distribution channels are formed to solve three critical distribution problems: functional performance, reduced complexity, and specialization.

Answer 30. (b)

Kaizen Costing :

Kaizen costing is a modification of standard costing which is essential to realize the planned cost reductions in continuous time. Kaizen costing is a Japanese contribution to cost accounting. Kaizen costing is continuous improvement applied to cost reduction in the manufacturing stage of a product's life. Like that of standard costing programme, the aim of Kaizen costing is to remove inefficiencies from production processes.

Kaizen costing tracks the cost reduction plans on a monthly basis. The Kaizen costing targets are expressed in the physical resources terms. If the head of a group fails to achieve the Kaizen costing target by 1 percent, review by senior will start. Resource consumption is so tightly controlled in many Japanese firms. Thus the planned cost reductions are planned and monitored through Kaizen cost targets in terms of physical resources.

While implementing the concept of Kaizen, following few rules are to be remembered :

- List down your own problems.
- Grade your problems as to minor, difficult and major.
- Select the smallest minor problem and start with it. After tackling this, move on to next graded problem and so on.
- Know and always remember, improvement is a part of daily routine.
- Never accept status quo.
- Never reject any idea before trying it.
- Share the experiments with colleagues.
- Eliminate already tried but failed experiments, while sharing the problems with your colleagues.
- Never hide problems, always highlight them.

Answer 30. (c)

Five S Concept- Five 'S' are derived from the first letters of the words :

SEIRI means Organization or sorting

SEITON means straighten or prepare correctly

SEISO means Cleanup or Cleanliness

SEIKETSU means Standardization

SHITSUKE means Discipline

Advantages of 5S By thoroughly enforcing 5S in each work area.

1. Operations can be performed without error, proceeding in a well-regulated fashion, resulting in fewer defective items thereby increasing the overall quality of product.
2. Operations can be performed safely and comfortably, reducing the chances of accidents.
3. Machinery and equipment can be carefully maintained, reducing the number of breakdowns.
4. Operations can be performed efficiently, eliminating waste thereby incrasing the efficiency and productivity.

Answer 30. (d)

Six Sigma : Six Sigma is a rigorous and a systematic methodology that utilizes information (management by facts) and statistical analysis to measure and improve a company's operational performance, practices and systems by identifying and preventing 'defects' in manufacturing and service-related processes in order to anticipate and exceed expectations of all stakeholders to accomplish effectiveness.

Six Sigma is a business management strategy originally developed by Motorola, USA in 1981. As of 2010[update], it enjoys widespread application in many sectors of industry, although its application is not without controversy.

Six Sigma seeks to improve the quality of process outputs by identifying and removing the causes of defects (errors) and minimizing variability in manufacturing and business processes.It uses a set of quality management methods, including statistical methods, and creates a special infrastructure of people within the organization ("Black Belts", "Green Belts", etc.) who are experts in these methods. Each Six Sigma project carried out within an organization follows a defined sequence of steps and has quantified targets. These targets can be financial (cost reduction or profit increase) or whatever is critical to the customer of that process (cycle time, safety, delivery, etc.).

The term *six sigma* originated from terminology associated with manufacturing, specifically terms associated with statistical modelling of manufacturing processes. The maturity of a manufacturing process can be described by a *sigma* rating indicating its yield, or the percentage of defect-free products it creates. A six-sigma process is one in which 99.99966% of the products manufactured are free of defects, compared to a one-sigma process in which only 31% are free of defects. Motorola set a goal of "six sigmas" for all of its manufacturing operations and this goal became a byword for the management and engineering practices used to achieve it.

Answer 30. (e)

PDCA : PDCA – ("Plan-Do-Check-Act") is an iterative four-step problem-solving process typically used in quality control. PDCA was made popular by Dr. W. Edwards Father of modern quality control; however it was always referred to by him as the "Shewhart cycle." Later in Deming's career, he modified PDCA to "Plan, Do, Study, Act" (PDSA) so as to better describe his recommendations.

The concept of PDCA comes out of the Scientific Method. The scientific method can be written as "hypothesis" - "experiment" - "evaluation" or Plan, Do, and Check. Shewhart described manufacture under "control" -

under statistical control - as a three step process of specification, production, and inspection. The also specifically related this to the Scientific Method of hypothesis, experiment and evaluation. Shewhart, says that the statistician “must help to change the demand [for goods] by showing... how to close up the tolerance range and to improve the quality of goods.” Clearly, Shewhart intended the analyst to take action based on the conclusions of the evaluation. PDCA has an inherent circular paradigm, it assumes that everything starts with Planning. Plan has a limited range of meaning. Shewart intended that experiments and quality control should be planned to deliver results in accordance with the specifications, which is good advice. However, Planning was not intended to cover aspects such as creativity, innovation, invention. In these aspects particularly when based upon imagination, it is often impossible or counterproductive to plan. Hence, PDCA is inapplicable in these situations.

FINAL EXAMINATION

(REVISED SYLLABUS - 2008)

GROUP - IV

Paper-16 : ADVANCED FINANCIAL ACCOUNTING & REPORTING

Q1. Write short notes on the Advantages and disadvantages of setting of Accounting Standards.

Answer 1.

The Accounting Standards seek to describe the accounting principles, the valuation techniques and the methods of applying the accounting principles in the preparation and presentation of financial statements so that they may give a true and fair view. The ostensible purpose of the standard setting bodies is to promote the dissemination of timely and useful financial information to investors and certain other parties having an interest in companies' economic performance. The setting of accounting standards has the following advantages:

(i) Standards reduce to a reasonable extent or eliminate altogether confusing variations in the accounting treatments used to prepare financial statements.

(ii) There are certain areas where important information are not statutorily required to be disclosed. Standards may call for disclosure beyond that required by law.

(iii) The application of accounting standards would, to a limited extent, facilitate comparison of financial statements of companies situated in different parts of the world and also of different companies situated in the same country. However, it should be noted in this respect that differences in the institutions, traditions and legal systems from one country to another give rise to differences in accounting standards practised in different countries.

However, there are some **disadvantages** of setting of accounting standards:

(i) Alternative solutions to certain accounting problems may each have arguments to recommend them. Therefore, the choice between different alternative accounting treatments may become difficult.

(ii) There may be a trend towards rigidity and away from flexibility in applying the accounting standards.

(iii) Accounting standards cannot override the statute. The standards are required to be framed within the ambit of prevailing statutes.

Q2. (a) Briefly indicate the items, which are included in the expression "borrowing cost" as explained in AS 16.

(b) Explain the difference between direct and indirect methods of reporting cash flows from operating activities with reference to Accounting Standard 3(AS 3) revised.

(c) Write short note on Effect of Uncertainties on Revenue Recognition.

Answer 2.

(a) Borrowing costs: Borrowing costs are interest and other costs incurred by an enterprise in connection with the borrowing of funds.

As per para 4 of AS 16 on Borrowing Costs, borrowing costs may include :

(i) Interest and commitment charges on bank borrowings and other short-term and long-term borrowings;

(ii) Amortization of discounts or premiums relating to borrowings ;

(iii) Amortization of ancillary costs incurred in connection with the arrangement of borrowings;

(iv) Finance charges in respect of assets acquired under finance leases or under other similar arrangements; and

(v) Exchange differences arising from foreign currency borrowings to the extent that they are regarded as an adjustment to interest costs.

(b) As per para 18 of AS 3 (Revised) on Cash Flow Statements, an enterprise should report cash flows from operating activities using either:

(i) The direct method whereby major classes of gross cash receipts and gross cash payments are disclosed; or

(ii) The indirect method, whereby net profit or loss is adjusted for the effects of transactions of a non-cash nature, any deferrals or accruals of past or future operating cash receipts or payments, and items of income or expense associated with investing or financing cash flows.

The direct method provides information which may be useful in estimating future cash flows and which is not available under the indirect method and is, therefore, considered more appropriate than the indirect method. Under the direct method, information about major classes of gross cash receipts and gross cash payments may be obtained either:

(a) from the accounting records of the enterprise; or

(b) by adjusting sales, cost of sales (interest and similar income and interest expense and similar charges for a financial enterprise) and other items in the statement of profit and loss for:

(i) changes during the period in inventories and operating receivables and payables:

(ii) other non-cash items; and

(iii) other items for which the cash effects are investing or financing cash flows.

Under the indirect method, the net cash flow from operating activities is determined by adjusting net profit or loss for the effects of:

(i) changes during the period in inventories and operating receivables and payables;

(ii) non-cash items such as depreciation, provisions, deferred taxes, and unrealized foreign exchange gains and losses; and

(iii) all other items for which the cash effects are investing or financing cash flows.

Alternatively, the net cash flow from operating activities may be presented under the indirect method by showing the operating revenues and expenses, excluding non-cash items disclosed in the statement of profit and loss and the changes during the period in inventories and operating receivables and payables.

(c) **Effect of Uncertainties on Revenue Recognition**

Para 9 of AS 9 on "Revenue Recognition" deals with the effect of uncertainties on Revenue Recognition. The para states:

(i) Recognition of revenue requires that revenue is measurable and at the time of sale or the rendering of the service it would not be unreasonable to expect ultimate collection.

(ii) Where the ability to assess the ultimate collection with reasonable certainty is lacking at the time of raising any claim, e.g., for escalation of price, export incentives, interest etc. revenue recognition is postponed to the extent of uncertainty involved. In such cases, it may be appropriate to recognise, revenue only when it is reasonably certain that the ultimate collection will be made. When there is uncertainty as to ultimate collection, revenue is recognised at the, time of sale or rendering of service even, though payments are made by instalments.

(iii) When the uncertainty relating to collectability arises subsequent to the time of sale or rendering of the service, it is more appropriate to make a separate provision to reflect the uncertainty rather than to adjust the amount of revenue originally recorded.

(iv) An essential criterion for the recognition of revenue is that the consideration receiv-able for the sale of goods, the rendering of services or from the use by others of enterprise resources is reasonably determinable. When such consideration is not determinable within reasonable limits; the recognition of revenue is postponed.

(v) When recognition of revenue is postponed due to the effect of uncertainties, it is considered as revenue of the period in which it is properly recognised.

Q3. Sagar Limited belongs to the engineering industry. The Chief Accountant has prepared the draft accounts for the year ended 31.03.09. You are required to advise the company on the following items from the viewpoint of finalisation of accounts, taking note of the mandatory accounting standards.

(a) An audit stock verification during the year revealed that the opening stock of the year was understated by Rs. 3 lakhs due to wrong counting.

(b) The company purchased on 01.04.08 a special purpose machinery for Rs. 25 lakhs. It received a Central Government Grant for 20% of the price. The machine has an effective life of 10 years.

(c) The company undertook a contract for building a crane for Rs. 10 lakhs. As on 31.03.09 it incurred a cost of Rs. 1.5 lakhs and expects that there will be Rs. 9 lakhs more for completing the crane. It has received so far Rs. 1 lakh as progress payment.

Answer 3.

(a) The wrong counting of opening stock of the current year/closing stock of the previous year must have also resulted in lowering of profits of previous year, brought forward to the current year. The adjustments are required to be made in the current year in respect of these errors in the preparation of the financial statements of the prior period and should therefore be treated as prior period adjustments as per AS 5 (Revised). Accordingly, the rectifications relating to both opening stock of the current year and profit brought forward from the previous year should be separately disclosed in the current statement of profit and loss together with their nature and amount in a manner that their impact on current profit or loss can be perceived.

(b) AS 12 'Accounting for Government Grants' regards two methods of presentation, of grants related to specific fixed assets, in financial statements as acceptable alternatives. Under the first method, the grant can be shown as a deduction from the gross book value of the machinery in arriving at its book value. The grant is thus recognised in the profit and loss statement over the useful life of a depreciable asset by way of a reduced depreciation charge.

Under the second method, it can be treated as deferred income which should be recog-nised in the profit and loss statement over the useful life of 10 years in the proportions in which depreciation on machinery will be charged. The deferred income pending its apportionment to profit and loss account should be disclosed in the balance sheet with a suitable description e.g., 'Deferred government grants' to be shown after 'Reserves and Surplus' but before 'Secured Loans'.

The following should also be disclosed :

(i) The accounting policy adopted for government grants, including the methods of presentation in the financial statements;

(ii) The nature and extent of government grants recognised in the financial statement.

(c) Para 21 of AS 7 (Revised) 'Construction Contracts' provides that when the outcome of a construction contract can be estimated reliably, contract revenue and contract costs associated with the construction contract should be recognized as revenue and expenses respectively with reference to the stage of completion of the contract activity at the reporting date.

As per para 32 of the standard, during the early stages of a contact it is often the case that the outcome of the contract cannot be estimated reliably. Nevertheless, it may be probable that the enterprise will recover the contract costs incurred. Therefore, contract revenue is recognized only to the extent of costs incurred that are expected to be recovered. As the outcome of the contract cannot be estimated reliably, no profit is recognised. Para 35 of the standard states that when it is probable that the total contacts costs will exceed total contract revenue, the expected loss should be recognised as an expense immediately. Thus the forseesable loss of Rs. 50,000 (expected cost Rs. 10.5 lakhs less contract revenue Rs. 10 lakhs) should be recognized as an expense in the year ended 31st March, 2009.

Also, the following disclosures should be given in the financial statements:

(i) The amount of contract revenue recognized as revenue in the period;

(ii) The aggregate amount of costs incurred and loss recognized upto the reporting date;

(iii) Amount of advances received;

(iv) Amount of retentions; and

(v) Gross amount due from/due to customers Amount*

Q4. A firm of contractors obtained a contract for construction of bridges across river Mahanadi. The following details are available in the records kept for the year ended 31st March, 2009.

	(Rs. in lakhs)
Total Contract Price	**1,000**
Work Certified	**500**
Work not Certified	**105**
Estimated further Cost to Completion	**495**
Progress Payment Received	**400**
To be Received	**140**

The firm seeks your advice and assistance in the presentation of accounts keeping in view the requirements of AS 7 (Revised) issued by ICAI.

Answer 4.

(a) Amount of foreseeable loss

	(Rs in lakhs)
Total cost of construction (500 + 105 + 495)	1,100
Less: Total contract price	1,000
Total foreseeable loss to be recognized as expense	100

According to para 35 of AS 7 (Revised 2002), when it is probable that total contract costs will exceed total contract revenue, the expected loss should be recognized as an expense immediately.

(b) Contract work-in-progress i.e. cost incurred to date are Rs. 605 lakhs

	(Rs in lakhs)
Work certified	500
Work not certified	105
	605

This is 55% (605/1,100 × 100) of total costs of construction.

(c) Proportion of total contract value recognised as revenue as per para 21 of AS 7 (Revised). 55% of Rs. 1,000 lakhs = Rs. 550 lakhs.

(d) Amount due from/to customers = Contract costs + Recognised profits – Recognised losses – (Progress payments received + Progress payments to be received)

= [605 + Nil – 100 – (400 + 140)] Rs. in lakhs

= [605 – 100 – 540] Rs. in lakhs

Amount due to customers = Rs. 35 lakhs

The amount of Rs. 35 lakhs will be shown in the balance sheet as liability.

(e) The relevant disclosures under AS 7 (Revised) are given below :

	Rs. in lakhs
Contract revenue	550
Contract expenses	605
Recognised profits less recognized losses	(100)
Progress billings (400 + 140)	540
Retentions (billed but not received from contractee)	140
Gross amount due to customers	35

Q5. In preparing the financial statements of R Ltd. for the year ended 31st March, 2009, you come across the following information. State with reasons, how you would deal with them in the financial statements :

(a) An unquoted long term investment is carried in the books at a cost of Rs. 2 lakhs. The published accounts of the unlisted company received in May, 2009 showed that the company was incurring cash losses with declining market share and the long term investment may not fetch more than Rs. 20,000.

(b) The company invested 100 lakhs in April, 2009 in the acquisition of another company doing similar business, the negotiations for which had started during the financial year.

(c) There was a major theft of stores valued at Rs. 10 lakhs in the preceding year which was detected only during current financial year (2008-09).

As it is stated in the question that financial statements for the year ended 31st March, 2009 are under preparation, the views have been given on the basis that the financial statements are yet to be completed and approved by the Board of Directors.

Answer5.

(a) Investments classified as long term investments should be carried in the financial statements at cost. However, provision for diminution shall be made to recognise a decline, other than temporary, in the value of the investments, such reduction being determined and made for each investment individually. Para 17 of AS 13 'Accounting for Investments' states that indicators of the value of an investment are obtained by reference to its market value, the investee's assets and results and the expected cash flows from the investment. On these bases, the facts of the given case clearly suggest that the provision for diminution should be made to reduce the carrying amount of long term investment to Rs. 20,000 in the financial statements for the year ended 31st March, 2009.

(b) Para 3.2 of AS 4 (Revised) defines "Events occurring after the balance sheet date" as those significant events, both favourable and unfavourable, that occur between the balance sheet date and the date on which the financial statements are approved by the Board of Directors in the case of a company. Accordingly, the acquisition of another company is an event occurring after the balance sheet date. However no adjustment to assets and liabilities is required as the event does not affect the determination and the condition of the amounts stated in the financial statements for the year ended 31st March, 2009. Applying para 15 which clearly states that/ disclosure should be made in the report of the approving authority of those events occurring after the balance sheet date that represent material changes and commitments affecting the financial position of the enterprise, the investment of Rs. 100 lakhs in April, 2009 in the acquisition of another company should be disclosed in the report of the Board of Directors to enable users of financial statements to make proper evaluations and decisions.

(c) Due to major theft of stores in the preceding year (2007-08) which was detected only during the current financial year (2008-09), there was overstatement of closing stock of stores in the preceding year. This must have also resulted in the overstatement of profits of previous year, brought forward to the current year. The adjustments are required to be made in the current year as 'Prior Period Items' as per AS 5 (Revised) on Net Profit or Loss for the Period, Prior Period Items and Changes in Accounting Policies. Accordingly, the adjustments relating to both opening stock of the current year and profit brought forward from the previous year should be separately disclosed in the statement of profit and loss together with their nature and amount in a manner that their impact on the current profit or loss can be perceived.

Note: Alternatively, it may be assumed that in the preceding year, the value of stock of stores as found out by physical verification of stocks was considered in the preparation of financial statements of the preceding year. In such a case, only the disclosure as to the theft and the resulting loss is required in the notes to the accounts for the current year i.e, year ended 31st March, 2009.

Q6. (a) A Limited Company closed its accounting year on 30.6.09 and the accounts for that period were considered and approved by the board of directors on 20th August, 2009. The company was engaged in laying pipe line for an oil company deep beneath the earth. While doing the boring work on 1.9.2009 it had met a rocky surface for which it was estimated that there would be an extra cost to the tune of Rs. 80 lakhs. You are required to state with reasons, how the event would be dealt with in the financial statements for the year ended 30.6.09.

(b) X Co. Ltd., has obtained an Institutional Loan of Rs. 680 lakhs for modernisation and renovation of its plant & machinery, Plant & machinery acquired under the modernisation scheme and installation completed on 31.3.09 amounted to Rs. 520 lakhs, 30 lakhs has been advanced to suppliers for additional assets and the balance loan of Rs. 130 lakhs has been utilized for working capital purpose. The total interest paid for the above loan amounted to Rs. 62 lakhs during 2008-09.

You are required to state how the interest on the institutional loan is to be accounted for in the year 2008-09.

(c) Y Co. Ltd., used certain resources of X Co. Ltd. In return X Co. Ltd. received Rs. 10 lakhs and Rs. 15 lakhs as interest and royalties respective from Y Co. Ltd. during the year 2008-2009.

You are required to state whether and on what basis these revenues can be recognised by X Co. Ltd.

(d) A Ltd. purchased fixed assets costing Rs. 3,000 lakhs on 1.1.09 and the same was fully financed by foreign currency loan (U.S. Dollars) payable in three annual equal instalments. Exchange rates were 1 Dollar = Rs. 40.00 and Rs. 42.50 as on 1.1.09 and 31.12.09 respectively. First instalment was paid on 31.12.09. The entire difference in foreign exchange has been capitalized.

You are required to state, how these transactions would be accounted for.

(e) A Limited Company finds that the stock sheets as on 31.3.08 had included twice an item the cost of which was Rs. 20,000.

You are asked to suggest, how the error would be dealt with in the accounts of the year ended 31.3.09

Answer 6.

(a) Para 3.2 of AS 4 (Revised) on Contingencies and Events Occurring after the Balance Sheet Date defines 'events occurring after the balance sheet date' as 'significant events, both favourable and unfavourable, that occur between the balance sheet date and the date on which financial statements are approved by the Board of Directors in the case of a company'. The given case is discussed in the light of the above mentioned definition and requirements given in paras 13-15 of the said AS 4 (Revised).

In this case the incidence, which was expected to push up cost became evident after the date of approval of the accounts. So that was not an 'event occurring after the balance sheet date'. However, this may be mentioned in the Directors' Report.

(b) The treatment for total interest amount of Rs. 68 lakhs can be given as follows :

Purpose	Nature	Interest to be capitalized	Interest to be charged to profit and loss account
		Rs. in lakhs	Rs. in lakhs
Modernisation and renovation of plant and machinery	Qualifying asset*		
Advance to suppliers for additional assets	Qualifying asset*	$\frac{62 \times 30}{680} = 2.74$	
Working Capital	Not a qualifying asset		$\frac{62 \times 130}{680} = 11.85$
		50.15	11.85

(c) As per para 13 of AS 9 on Revenue Recognition, revenue arising from the use by others of enterprise resources yielding interest and royalties should only be recognised when no significant uncertainty as to measurability or collectability exists. These revenues are recognised on the following bases:

(i) **Interest:** on a time proportion basis taking into account the amount outstanding and the rate applicable.

(ii) **Royalties:** on an accrual basis in accordance with the terms of the relevant agreement.

(d) As per para 13 of AS 11 (Revised 2003) 'The Effects of Changes in Foreign Exchange Rates', exchange differences arising on the settlement of monetary items or on reporting an enterprise's monetary items at rates different from those at which they were initially recorded during the period, or reported in previous financial statements, should be recognized as income or expenses in the period in which they arise. Thus exchange differences arising on repayment of liabilities incurred for the purpose of acquiring fixed assets are recognized as income or expense.

Calculation of Exchange Difference :

Foreign currency loan = $\frac{\text{Rs. 3,000 lakhs}}{\text{Rs. 40}}$ = 75 lakhs US Dollars

Exchange difference = 75 lakhs US Dollars ×(42.50 – 40.00)

= Rs. 187.50 lakhs

(including exchange loss on payment of first instalment)

Therefore, entire loss due to exchange differences amounting Rs. 187.50 lakhs should be charged to profit and loss account for the year.

(e) The error in the recording of closing stock of the year ended 31st March, 2008 must have also resulted in overstatement of profits of previous year, brought forward to the current year ended 31st March, 2009. Vide para 4 of AS 5 (Revised) on Net Profit or Loss for the Period, Prior Period Items and Changes in Accounting Policies, the rectifications as required in the current year are 'Prior Period Items'. Accordingly, Rs. 20,000 should be deducted from opening stock in the profit and loss account. And Rs. 20,000 should be charged as prior period adjustment in the profit and loss account for the year ended 31st March 2009 in accordance with para 15 of AS 5 (Revised) which requires that the nature and amount of prior period items should be separately disclosed in the statement of profit and loss in a manner that their impact on the current profit or loss can be perceived.

Q7. (i) Advise P Co. Ltd. about the treatment of the following in the Final Statement of Accounts for the year ended 31st March, 2009.

A claim lodged with the Railways in March, 2006 for loss of goods of Rs. 2,00,000 had been passed for payment in March, 2009 for Rs. 1,50,000. No entry was passed in the books of the Company, when the claim was lodged.

(ii) The notes to accounts of X Ltd. for the year 2008-09 include the following :

"Interest on bridge loan from banks and Financial Institutions and on Debentures specifically obtained for the Company's Fertiliser Project amounting to Rs. 1,80,80,000 has been capitalized during the year, which includes approximately Rs. 1,70,33,465 capitalised in respect of the utilization of loan and debenture money for the said purpose." Is the treatment correct? Briefly comment.

Answer 7.

(i) Prudence suggests non-consideration of claim as an asset in anticipation. So receipt of claims is generally recognised on cash basis. Para 9.2 of AS 9 on Revenue Recog-nition states that where the ability to assess the ultimate collection with reasonable certainty is lacking at the time of raising any claim, revenue recognition is postponed to the extent of uncertainty involved. Para 9.5 of AS 9 states that when recognition of revenue is postponed due to the effect of uncertainties, it is considered as revenue of the period in which it is properly recognised. In this case it may be assumed that collectability of claim was not certain in the earlier periods. This is supposed from the fact that only Rs. 1,50,000 were collected against a claim of Rs. 2,00,000. So this transaction cannot be taken as a Prior Period Item.

In the light of revised AS 5, it will not be treated as extraordinary item. However, para 12 of AS 5 (Revised) states that when items of income and expense within profit or loss from ordinary activities are of such size, nature, or incidence that their disclosure is relevant to explain the performance of the enterprise for the period, the nature and amount of such items should be disclosed separately. Accordingly, the nature and amount of this item should be disclosed separately as per para 12 of AS 5 (Revised).

(ii) The treatment done by the company is not in accordance with AS 16 'Borrowing Costs'. As per para 10 of AS 16, to the extent that funds are borrowed specifically for the purpose of obtaining a qualifying asset, the amount of borrowing costs eligible for capitalisation on that asset should be determined as the actual borrowing costs incurred on that borrowing during the period. Hence, the capitalisation of borrowing costs should be restricted to the actual amount of interest expenditure i.e. Rs. 1,70,33,465. Thus, there is an excess capitalisation of Rs. 10,46,535. This has resulted in overstatement of profits by Rs. 10,46,535 and amount of fixed assets has also gone up by this amount.

Q8. State with reference to accounting standard, how will you value the inventories in the following cases :

(i) Raw material was purchased at Rs. 100 per kilo. Price of raw material is on the decline. The finished goods in which the raw material is incorporated is expected to be sold at below cost. 10,000 kgs. of raw material is on stock at the year end. Replacement cost is Rs. 80 per kg.

(ii) In a production process, normal waste is 5% of input. 5,000 MT of input were put in process resulting in a wastage of 300 MT. Cost per MT of input is Rs. 1,000. The entire quantity of waste is on stock at the year end.

(iii) Per kg. of finished goods consisted of :

Material cost Rs. 100 per kg.

Direct labour cost Rs. 20 per kg.

Direct variable production overhead Rs. 10 per kg.

Fixed production charges for the year on normal capacity of one lakh kgs. is Rs. 10 lakhs. 2,000 kgs. of finished goods are on stock at the year end.

Answer 8.

(i) As per para 24 of AS 2 (Revised) on Valuation of Inventories, materials and other supplies held for use in the production of inventories are not written down below cost if the finished product in which they will be incorporated are expected to be sold at or above cost. However, when there has been a decline in the price of materials and it is estimated that the cost of the finished products will exceed net realisable value, the materials are written down to net realisable value. In such circumstances, the replacement cost of the materials may be the best available measure of their net realisable value.

Hence, in the given case, the stock of 10,000 kgs of raw material will be valued at Rs. 80 per kg. The finished goods, if on stock, should be valued at cost or net realisable value whichever is lower.

(ii) As per para 13 of AS 2 (Revised), abnormal amounts of waste materials, labour or other production costs are excluded from cost of inventories and such costs are recognised as expenses in the period in which they are incurred.

In this case, normal waste is 250 MT and abnormal waste is 50 MT.

The cost of 250 MT will be included in determining the cost of inventories (finished goods) at the year end. The cost of abnormal waste amounting to Rs. 50,000 (50 MT x Rs. 1,000) will be charged in the profit and loss statement.

(iii) In accordance with paras 8 and 9 of AS 2 (Revised), the costs of conversion include a systematic allocation of fixed and variable production overheads that are incurred in converting materials into finished goods. The allocation of fixed production overheads for the purpose of their inclusion in the costs of conversion is based on the normal capacity of the production facilities.

Thus, cost per kg. of finished goods can be computed as follows :

	Rs.
Material cost	100
Direct labour cost	20
Direct variable production overhead	10
Fixed production overhead $\left(\frac{\text{Rs. } 10,00,000}{1,00,000}\right)$	10
	140

Thus, the value of 2,000 kgs. of finished goods on stock at the year end will be Rs. 2,80,000 (2,000 kgs. × Rs. 140).

Q9. From the following Summary Cash Account of X Ltd. prepare Cash Flow Statement for the year ended 31st March, 2009 in accordance with AS 3 (Revised) using the direct method. The company does not have any cash equivalents.

Summary Cash Account for the year ended 31.3.2009.

	Rs. '000		**Rs. '000**
Balance on 1.4.2008	50	Payment to Suppliers	2,000
Issue of Equity Shares	300	Purchase of Fixed Assets	200
Receipts from Customers	2,800	Overhead expense	200
Sale of Fixed Assets	100	Wages and Salaries	100
		Taxation	250
		Dividend	50
		Repayment of Bank Loan	300
	—	Balance on 31.3.2009	150
	3,250		3,250

Answer 9.

X Ltd.
Cash Flow Statement for the year ended 31st March, 2009
(Using the direct method)

	Rs. '000	Rs. '000
Cash flows from operating activities		
Cash receipts from customers	2,800	
Cash payment to suppliers	(2,000)	
Cash paid to employees	(100)	
Cash payments for overheads	(200)	
Cash generated from operations	500	
Income tax paid	(250)	
Net cash from operating activities		250
Cash flows from investing activities		
Payment for purchase of fixed assets	(200)	
Proceeds from sale of fixed assets	100	
Net cash used in investing activities		(100)
Cash flows from financing activities		
Proceeds from issuance of equity shares	300	
Bank loan repaid	(300)	
Dividend paid	(50)	
Net cash used in financing activities		(50)
Net increase in cash		100
Cash at beginning of the period		50
Cash at end of the period		150

Q10. Answer the following questions by quoting the relevant Accounting Standard :

(i) During the year 2008-2009, a medium size manufacturing company wrote down its inventories to net realisable value by Rs. 5,00,000. Is a separate disclosure necessary?

(ii) A Limited company has been including interest in the valuation of closing stock. In 2008-2009, the management of the company decided to follow AS 2 and accordingly interest has been excluded from the valuation of closing stock. This has resulted in a decrease in profits by Rs. 3,00,000. Is a disclosure necessary? If so, draft the same.

(iii) A company signed an agreement with the Employees Union on 1.9.2008 for revision of wages with retrospective effect from 30.9.2008. This would cost the company an additional liability of Rs. 5,00,000 per annum. Is a disclosure necessary for the amount paid in 2008-09?

Answer 10.

(i) Although the case under consideration does not relate to extraordinary item, but the nature and amount of such item may be relevant to users of financial statements in understanding the financial position and performance of an enterprise and in making projections about financial position and performance. Para 12 of AS 5 (Revised in 1997) on Net Profit or Loss for the Period, Prior Period Items and Changes in Accounting Policies states that :

"When items of income and expense within profit or loss from ordinary activities are of such size, nature or incidence that their disclosure is relevant to explain the performance of the enterprise for the period, the nature and amount of such items should be disclosed separately."

Circumstances which may give to separate disclosure of items of income and expense in accordance with para 12 of AS 5 include the write-down of inventories to net realisable value as well as the reversal of such write-downs.

(ii) As per AS 5 (Revised), change in accounting policy can be made for many reasons, one of these is for compliance with an accounting standard. In the instant case, the company has changed its accounting policy in order to conform with the AS 2 (Revised) on Valuation of Inventories. Therefore, a disclosure is necessary in the following lines by way of notes to the annual accounts for the year 2008-2009.

"To be in conformity with the Accounting Standard on Valuation of Inventories issued by ICAI, interest has been excluded from the valuation of closing stock unlike preceding years. Had the same principle been followed in previous years, profit for the year and its corresponding effect on the year end net assets would have been higher by Rs. 3,00,000."

(iii) It is given that revision of wages took place on 1st September, 2009 with retrospective effect from 30.9.2008. Therefore wages payable for the half year from 1.10.2008 to 31.3.2009 cannot be taken as an error or omission in the preparation of financial statements and hence this expenditure cannot be taken as a prior period item.

Additional wages liability of Rs. 7,50,000 (for 1½ years @ Rs. 5,00,000 per annum) should be included in current year's wages.

It may be mentioned that additional wages is an expense arising from the ordinary activities of the company. Although abnormal in amount, such an expense does not qualify as an extraordinary item. However, as per Para 12 of AS 5 (Revised), when items of income and expense within profit or loss from ordinary activities are of such size, nature or incidence that their disclosure is relevant to explain the performance of the enterprise for the period, the nature and amount of such items should be disclosed separately.

Q11. XYZ Ltd. has undertaken a project for expansion of capacity as per the following details:

	Plan Rs.	**Actual Rs.**
April, 2009	**2,00,000**	**2,00,000**
May, 2009	**2,00,000**	**3,00,000**
June, 2009	**10,00,000**	**–**
July, 2009	**1,00,000**	**–**
August, 2009	**2,00,000**	**1,00,000**
September, 2009	**5,00,000**	**7,00,000**

The company pays to its bankers at the rate of 12% p.a., interest being debited on a monthly basis. During the half year company had Rs. 10 lakhs overdraft upto 31st July, surplus cash in August and again overdraft of over Rs. 10 lakhs from 1.9.2009. The company had a strike during June and hence could not continue the work during June. Work was again commenced on 1st July and all the works were completed on 30th September. Assume that expenditure were incurred on 1st day of each month.

Calculate:

(i) Interest to be capitalised.

(ii) Give reasons wherever necessary.

Assume:

(a) Overdraft will be less, if there is no capital expenditure.

(b) The Board of Directors based on facts and circumstances of the case has decided that any capital expenditure taking more than 3 months as substantial period of time.

Answer 11.

(a) **XYZ Ltd.**

Month	**Actual Expenditure Rs.**	**Interest Capitalised Rs.**	**Cumulative Amount Rs.**	
April, 2009	2,00,000	2,000	2,02,000	
May, 2009	3,00,000	5,020	5,07,020	
June, 2009	–	5,070	5,12,090	Note 2
July, 2009	–	5,120	5,17,210	
August, 2009	1,00,000	–	6,17,210	Note 3
September, 2009	7,00,000	10,000	13,27,210	Note 4
	13,00,000	27,210	13,27,210	

Note:

1. There would not have been overdraft, if there is no capital expenditure. Hence, it is a case of specific borrowing as per AS 16 on Borrowing Costs.
2. The company had a strike in June and hence could not continue the work during June. As per para 14 (c) of AS 16, the activities that are necessary to prepare the asset for its intended use or sale are in progress. The strike is not during extended period. Thus during strike period, interest need to be capitalised.
3. During August, the company did not incur any interest as there was surplus cash in August. Therefore, no amount should be capitalised during August as per para 14(b) of AS 16.
4. During September, it has been taken that actual overdraft is Rs. 10 lakhs only. Hence, only Rs. 10,000 interest has been capitalised even though actual expenditure exceeds Rs. 10 lakhs.

Alternatively, interest may be charged on total amount of (Rs. 6,17,210 + Rs. 7,00,000 = 13,17,210) for the month of September, 2009 as it is given in the question that overdraft was over Rs. 10 lakhs from 1.9.2009 and not exactly Rs. 10 lakhs. In that case, interest amount Rs. 13,172 will be capitalised for the month of September.

Q12. Briefly explain, as per relevant Accounting Standard:

(a) TVSM company has taken a Transit Insurance Policy. Suddenly in the year 2008-2009 the percentage of accident has gone up to 7% and the company wants to recognise insurance claim as revenue in 2008-2009 in accordance with relevant Accounting Standards. Do you agree?

(b) SCL Ltd. sells agriculture products to dealers. One of the condition of sale is that interest is payable at the rate of 2% p.m., for delayed payments. Percentage of interest recovery is only 10% on such overdue outstanding due to various reasons. During the year 2008-2009 the company wants to recognise the entire interest receivable. Do you agree?

(c) ABC Ltd. was making provision for non-moving stocks based on no issues for the last 12 months upto 31.3.2008.

The company wants to provide during the year ending 31.3.2009 based on technical evaluation :

Total value of stock	**Rs. 100 lakhs**
Provision required based on 12 months issue	**Rs. 3.5 lakhs**
Provision required based on technical evaluation	**Rs. 2.5 lakhs**

Does this amount to change in Accounting Policy? Can the company change the method of provision?

(d) XYZ is an export oriented unit and was enjoying tax holiday upto 31.3.2008. No provision for deferred tax liability was made in accounts for the year ended 31.3.2008. While finalising the accounts for the year ended 31.3.2009, the Accountant says that the entire deferred tax liability upto 31.3.2008 and current year deferred tax liability should be routed through Profit and Loss Account as the relevant Accounting Standard has already become mandatory from 1.4.2007. Do you agree?

Answer 12.

(a) AS 9 on Revenue Recognition defines revenue as 'gross inflow of cash, receivables or other consideration arising in the course of the ordinary activities of the enterprise from the sale of goods, from the rendering of services and from the use by others of enterprise resources yielding interest, royalties and dividends'.

To recognise revenue AS 9 requires that revenue arises from ordinary activities and that it is measurable and there should be no uncertainty. As per para 9.2 of the Standard, where the ability to assess the ultimate collection with reasonable certainty is lacking at the time of raising any claim, revenue recognition is postponed to the extent of uncertainty involved. In such cases, it may be appropriate to recognise revenue only when it is reasonably certain that the ultimate collection will be made.

In the given case, TVSM company wants to suddenly recognise Insurance claim because it has increased over the previous year. But, there are uncertainties involved in the settlement of the claim. Also, the claim does not seem to be in the course of ordinary activity of the company.

Hence, TVSM company is not advised to recognise the Insurance claim as revenue.

(b) As per para 9.2 of AS 9 on Revenue Recognition, where the ability to assess the ultimate collection with reasonable certainty is lacking at the time of raising any claim, e.g. for escalation of price, export incentives, interest etc, revenue recognition is postponed to the extent of uncertainty involved. In such cases, it may be appropriate to recognise revenue only when it is reasonably certain that the ultimate collection will be made. Where there is no uncertainty as to ultimate collection, revenue is recognised at the time of sale or rendering of service even though payments are made by instalments.

Thus, SCL Ltd. cannot recognise the interest amount unless the company actually receives it. 10% rate of recovery on overdue outstandings is also an estimate and is not certain. Hence, the company is advised to recognise interest receivable only on receipt basis.

(c) The decision of making provision for non-moving stocks on the basis of technical evaluation does not amount to change in accounting policy. Accounting policy of a company may require that provision for non-moving stocks should be made. The method of estimating the amount of provision may be changed in case a more prudent estimate can be made.

In the given case, considering the total value of stock, the change in the amount of required provision of non-moving stock from Rs.3.5 lakhs to Rs.2.5 lakhs is also not material. The disclosure can be made for such change in the following lines by way of notes to the accounts in the annual accounts of ABC Ltd. for the year 2008-09:

"The company has provided for non-moving stocks on the basis of technical evaluation unlike preceding years. Had the same method been followed as in the previous year, the profit for the year and the corresponding effect on the year end net assets would have been higher by Rs.1 lakh."

(d) Paragraph 33 of AS 22 on "Accounting For Taxes on Income" relates to the transitional provisions. It says, "On the first occasion that the taxes on income are accounted for in accordance with this statement, the enterprise should recognise, in the financial statements, the deferred tax balance that has accumulated prior to the adoption of this statement as deferred tax asset/liability with a corresponding credit/charge to the revenue reserves, subject to the consideration of prudence in case of deferred tax assets.

Further Paragraph 34 lays down, "For the purpose of determining accumulated deferred tax in the period in which this statement is applied for the first time, the opening balances of assets and liabilities for accounting purposes and for tax purposes are compared and the differences, if any, are determined. The tax effects of these differences, if any, should be recognised as deferred tax assets or liabilities, if these differences are timing differences."

Therefore, in the case of XYZ, even though AS 22 has come into effect from 1.4.2001, the transitional provisions permit adjustment of deferred tax liability/asset upto the previous year to be adjusted from opening reserve. In other words, the deferred taxes not provided for alone can be adjusted against opening reserves.

Provision for deferred tax asset/liability for the current year should be routed through profit and loss account like normal provision.

Q13. PQR Ltd.'s accounting year ends on 31st March. The company made a loss of Rs. 2,00,000 for the year ending 31.3.2007. For the years ending 31.3.2008 and 31.3.2009, it made profits of Rs. 1,00,000 and Rs. 1,20,000 respectively. It is assumed that the loss of a year can be carried forward for eight years and tax rate is 40%. By the end of 31.3.2007, the company feels that there will be sufficient taxable income in the future years against which carry forward loss can be set off. There is no difference between taxable income and accounting income except that the carry forward loss is allowed in the years ending 2008 and 2009 for tax purposes. Prepare a statement of Profit and Loss for the years ending 2007, 2008 and 2009.

Answer 13.

Statement of Profit and Loss

	31.3.2007	**31.3.2008**	**31.3.2009**
	Rs.	**Rs.**	**Rs.**
Profit (Loss)	(2,00,000)	1,00,000	1,20,000
Less: Current tax			(8,000)
Deferred tax:			
Tax effect of timing differences originating during the year	80,000		
Tax effect of timing differences reversed/ adjusted during the year		(40,000)	(40,000)
Profit (loss) after tax effect	(1,20,000)	60,000	72,000

Q14. (a) At the end of the financial year ending on 31st December, 2008, a company finds that there are twenty law suits outstanding which have not been settled till the date of approval of accounts by the Board of Directors. The possible outcome as estimated by the Board is as follows:

	Probability	**Loss (Rs.)**
In respect of five cases (Win)	**100%**	**—**
Next ten cases (Win)	**60%**	**—**
Lose (Low damages)	**30%**	**1,20,000**
Lose (High damages)	**10%**	**2,00,000**
Remaining five cases		
Win	**50%**	**—**
Lose (Low damages)	**30%**	**1,00,000**
Lose (High damages)	**20%**	**2,10,000**

Outcome of each case is to be taken as a separate entity. Ascertain the amount of contingent loss and the accounting treatment in respect thereof.

(b) Z Ltd. presents the following information for the year ending 31.03.2008 and 31.03.2009 from which you are required to calculate the Deferred Tax Asset/Liability assuming tax rate of 30% and state how the same should be dealt with as per relevant accounting standard.

	31.03.2008	**31.03.2009**
	Rs. (lakhs)	**Rs. (lakhs)**
Depreciation as per books	**4,010.10**	**4,023.54**
Unabsorbed carry forward business loss and depreciation allowance	**2,016.60**	**4,110.00**
Disallowance under Section 43B of Income tax Act, 1961	**518.35**	**611.45**
Deferred Revenue Expenses	**4.88**	**—**
Provision for Doubtful Debts	**282.51**	**294.35**

Z Ltd. had incurred a loss of Rs. 504 lakhs for the year ending 31.03.2009 before providing for Current Tax of Rs. 26.00 lakhs.

Answer 14.

(a) According to AS 29 'Provisions, Contingent Liabilities and Contingent Assets', contingent liability should be disclosed in the financial statements if following conditions are satisfied :

(i) There is a present obligation arising out of past events but not recognized as provision.

(ii) It is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation.

(iii) The possibility of an outflow of resources embodying economic benefits is also remote.

(iv) The amount of the obligation cannot be measured with sufficient reliability to be recognized as provision.

In this case, the probability of winning of first five cases is 100% and hence, question of providing for contingent loss does not arise. The probability of winning of next ten cases is 60% and for remaining five cases is 50%. As per AS 29, we make a provision if the loss is probable. As the loss does not appear to be probable and the possibility of an outflow of resources embodying economic benefits is not remote rather there is reasonable possibility of loss, therefore disclosure by way of note should be made. For the purpose of the disclosure of contingent liability by way of note, amount may be calculated as under:

Expected loss in next ten cases = 30% of Rs. 1,20,000 + 10% of Rs. 2,00,000
= Rs. 36,000 + Rs. 20,000
= Rs. 56,000

Expected loss in remaining five cases = 30% of Rs. 1,00,000 + 20% of Rs. 2,10,000
= Rs. 30,000 + Rs. 42,000
= Rs. 72,000

To disclose contingent liability on the basis of maximum loss will be highly unrealistic. Therefore, the better approach will be to disclose the overall expected loss of Rs. 9,20,000 (Rs. 56,000×10 + Rs. 72,000 × 5) as contingent liability.

(b)

	Rs. in lakhs 31.3.2008	**Rs. in lakhs 31.3.2009**
Carried Forward Business Loss and Depreciation Allowance	2,016.60	4,110.00
Ad: Disallowance under Section 43 B of Income Tax Act,1961	518.35	611.45
Provision for Doubtful Debts	282.51	294.35
	2,817.46	5,015.80
Less: Depreciation	4,010.10	4,023.54
	(-) 1,192.64	992.26
Less: Deferred Revenue Expenditure*	4.88	—
Timing Differences	(-) 1,197.52	992.26
Deferred Tax Liability	359.26	
Deferred Tax Asset		297.68

Where an enterprise has unabsorbed depreciation or carry forward of losses under tax laws, deferred tax assets should be recognized only to the extent that there is virtual certainty supported by convincing evidence that future taxable income will be available against which such deferred tax assets can be realized. The existence of unabsorbed depreciation or carry forward of losses is strong evidence that future taxable income may not be available. Deferred Tax Asset of Rs. 297.68 lakhs should not be recognized as an asset as per para 17 of AS 22 on 'Accounting for Taxes on Income'. Deferred Tax Liability of Rs. 359.26 lakhs should be disclosed under a separate heading in the balance sheet of Z Ltd., separately from current assets and current liabilities.

Q15. Briefly explain as per relevant Guidance Notes:

(a) HSL Ltd. is manufacturing goods for local sale and exports. As on 31st March, 2009, it has the following finished stocks in the factory warehouse:

(i) Goods meant for local sale Rs. 100 lakhs (cost Rs. 75 lakhs).

(ii) Goods meant for exports Rs. 50 lakhs (cost Rs. 20 lakhs).

Excise duty is payable at the rate of 16%. The company's Managing Director says that excise duty is payable only on clearance of goods and hence is not a cost. Please advise HSL using guidance note, if any issued on this, including valuation of stock.

(b) SFL Ltd. is a mutual fund. The fund values the investment on "mark to market basis". The Accountant argues since investment are valued on the above basis there is no necessity to disclose depreciation separately in the financial statements. Do you agree?

(c) A company has given counter guarantees of Rs. 2.25 crores to various banks in respect of the guarantees given by the said banks in favour of Government authorities. Outstanding counter guarantees as at the end of financial year 2008-2009 were Rs. 1.95 crores. How should this information be shown in the Financial Statements of the Company.

Answer 15.

(a) Guidance Note on Accounting Treatment for Excise Duty says that excise duty is a duty on manufacture or production of excisable goods in India.

According to Central Excise Rules, 2002, excise duty should be collected at the time of removal of goods from factory premises or factory warehouse. The levy of excise duty is upon the manufacture or production, the collection part of it is shifted to the stage of removal.

Further, paragraph 23(i) of the Guidance Note makes it clear that excise duty should be considered as a manufacturing expense and like other manufacturing expenses be considered as an element of cost for inventory valuation.

Therefore, in the given case of HSL Ltd., the Managing Director's contention that "excise duty is payable only on clearance of goods and hence is not a cost is incorrect. Excise duty on the goods meant for local sales should be provided for at the rate of 16% on the selling price, that is, Rs. 100 lakhs for valuation of stock.

Excise duty on goods meant for exports, should be provided for, since the liability for excise duty arises when the manufacture of the goods is completed. However, if it is assumed that all the conditions specified in Rule 19 of the Central Excise Rules, 2002 regarding export of excisable goods without payment of duty are fulfilled by HSL Ltd., excise duty may not be provided for.

(b) The Guidance Note on Accounting for Investments in the Financial statements of Mutual Funds provides that the investments should be marked to market on the balance sheet date. The provision for depreciation in the value of investments should be made in the books by debiting the Revenue Account. The provision so created should be shown as a deduction from the value of investments in the balance sheet. Clause 2(i) of the Eleventh Schedule provides that "where the financial statements are prepared on a mark to market basis, there need not be a separate provision for depreciation."

However keeping in view, 'prudence' as a factor for preparation of financial statements and correct disclosure of the amount of depreciation on investments, the guidance note recommends that the gross value of depreciation on investments should be reflected in the Revenue Account rather than the same being netted off with the appreciation in the value of other investments. In other words, depreciation/appreciation on investments should be worked out on an individual investment basis or by category of investment basis, but not on an overall basis or by category of investment.

In the given case of SFL Ltd., depreciation should be separately disclosed in the financial statements.

(c) The counter guarantee given by the company is, infact, an undertaking to perform what is, in any event, the obligation of the company itself. In any case, this is a matter which is in the control of the company itself and the mere possibility of a default by the company in the future cannot be said to involve the existence of a contingent liability on the balance sheet date.

Thus, as per 'Guidance Note on Guarantees and Counter-Guarantees given by Companies', no separate disclosure is required in respect of counter guarantees.

Q16. E Ltd. manufactures and sells food products. The following draft financial statements were prepared by the chief accountant for the year ended 31.3.2009 and placed before your for advice:

Profit and Loss Statement for the year ended 31.3.2009

(Figures in Rs. lakhs)

Sales and other income	**3,500**
Cost of goods sold including operating expenses and depreciation	**2,740**
Operating profit	**760**
Profit on sale of property	**200**
Interest charges	**300**
Profit before tax	**660**
Tax provision	**330**
Profit after tax	**330**
Proposed dividend	**300**
Profit retained	**30**
Add: Opening balance of profit	**360**
Profit carried to Balance Sheet	**390**

Balance Sheet as on 31.3.2009 (Figures in Rs. lakhs)

Liabilities			Assets		
Share Capital		3,000	Fixed Assets	5,000	
General reserve		540	Less: Depreciation	1,000	4,000
Profit and loss account balance		390	Current Assets		
Secured Loans		2,000	Stock	800	
Current Liabilities and Provisions			Debtors	1,000	
Creditors	240		Royalty receivable	100	
Provision for tax	330		Advance tax	200	
Proposed dividend	300	870	Cash balance	550	2,650
		—	Miscellaneous expenditure to the extent not written off	150	
		6,800		6,800	

You are provided with further information as follows:

(a) On 1.4.08 E Ltd. had sold some of its fixed assets for Rs.100 lakhs [written down value Rs. 250 lakhs]. These assets were revalued earlier. As on 1.4.08 the revaluation reserve corresponding to these assets stood at Rs. 200 lakhs. The profit on sale of property as shown in the profit and loss statement represented the transfer of this amount. Loss on sale of the asset was included in the cost of goods sold etc.

(b) During the year E Ltd. undertook restructuring exercise of its operations at a cost of Rs. 150 lakhs. This amount stood included in "miscellaneous expenditure to the extent not written off".

(c) Included in sales and other income is a sum of Rs. 100 lakhs representing royalty receivable for supply of know-how to a company in South-East Asia. As per agreement the amount is to be received in US Dollars. However, exchange permission was denied to the company in South-East Asia for remitting the same.

(d) E Ltd. purchased fixed assets costing Rs. 1,825 lakhs on 1.4.08 and the same was fully financed by foreign currency loan [i.e. US Dollars] repayable in five equal instalments annually. [Exchange rate at the time of purchase was 1 US Dollar = Rs. 36.50]. As on 31.3.09 the first instalment was paid when 1 US Dollar fetched Rs. 41.50. The entire loss on exchange was included in cost of goods sold etc. E Ltd. normally provides depreciation on fixed assets at 20% on WDV basis.

(e) Dividend at 10% on paid up equity capital is to be maintained as in prior years.

You are required to redraft the financial statements of E Ltd. for the year ended 31.3.09 in accordance with relevant provisions of accounting standards. Journal entries (wherever applicable) in respect of the information given are to be shown. Schedules previous year's figures and cash flow statement are not required.

Answer 16.

(a) As per para 14.4 and para 32 of AS 10 on Accounting for Fixed Assets, on disposal or a previously revalued item of fixed asset, the difference between net disposal proceeds and the net book value is normally charged or credited to the profit and loss statement except that to the extent such a loss is related to an increase which was previously recorded as a credit to revaluation reserve and which has not been subsequently reversed or utilised, it is charged directly to that account. The amount standing in revaluation reserve following the retirement or disposal of an asset which relates to that asset may be transferred to general reserve. Accordingly, the following journal entries are to be passed.

		(Rs. in lakhs)
Profit on Sale of Property	Dr.	200
To Loss on Sale of Fixed Assets		150
To General Reserve		50

[Alternatively, these entries can be passed through Revaluation Reserve Account. That is, 'Profit on Sale of Property' can be credited first to Revaluation Reserve Account and then, this Reserve will be debited with loss on sale of fixed assets (included in 'Cost of Goods Sold etc.') and the balance will be transferred to General Reserve.]

(b) As per para 12 of AS 5 (Revised) on Net Profit or Loss for the Period, Prior Period Items and Changes in Accounting Policies, when items of income and expense within profit or loss from ordinary activities are of such size, nature or incidence that their disclosure is relevant to explain the performance of the enterprise for the period, the nature and amount of such items should be disclosed separately.

Accordingly, the entire restructuring cost Rs. 150 lakhs requires separate disclosure in the statement of profit and loss instead of deferring and showing it under miscellaneous expenditure.

(c) According to para 9.2 of AS 9 on Revenue Recognition, where the ability to assess the ultimate collection with reasonable certainty is lacking at the time of raising any claim, e.g., for escalation of price, export incentives, interest etc., revenue recognition is postponed to the extent of uncertainty involved. In such cases. It may be appropriate to recognise revenue only when it is reasonably certain that the ultimate collection will be made.

Thus 'Sales and other income' should be reduced by Rs. 100 lakhs with equivalent credit to Royalty Receivable Account.

Alternatively, the students may apply para 9.3 of AS 9, after making reasonable assumption as to the timing of the uncertainty. According to para 9.3, when the uncertainty relating to collectability arises subsequent to the time of sale or the rendering of the service, it is more appropriate to make a separate provision to reflect the uncertainty rather than to adjust the amount of revenue originally recorded.

(d) As per para 13 of AS 11 (Revised 2003) 'The Effects of Changes in Foreign Exchange Rates', exchange differences arising on repayment of liabilities incurred for the purpose of acquiring fixed assets are recognized as incomes/expenses in the period in which they arise.

Calculation of Exchange loss :

$$\text{Foreign currency loan} = \frac{\text{Rs.1,825 lakhs}}{\text{Rs. 36.50}} = \text{50 lakhs US Dollars}$$

Exchange loss = 50 lakhs US dollars × (41.50 – 36.50) = Rs. 250 lakhs (including exchange loss on payment of first instalment)

Thus exchange loss of Rs. 250 lakhs should be recognized as expense in the profit and loss account for the year ended 31st March, 2009.

E Ltd.

Balance Sheet as at 31st March, 2009

				(Rs.in lakhs)
I	**SOURCES OF FUNDS**			
	(1) Shareholders' funds:			
	(a) Capital		3,000	
	(b) Reserves and surplus			
	General Reserve	590		
	Profit and Loss Account	240	830	3,830
	(2) Loan funds:			
	(a) Secured loans		2,000	
	(b) Unsecured loans		—	2,000
	TOTAL			5,830
II	**APPLICATION OF FUNDS**			
	(1) Fixed assets:			
	(a) Gross block		5,000	
	(b) Less: Depreciation		1,000	
	(c) Net block		4,000	
	(d) Capital work in progress		—	4,000
	(2) Investments			—
	(3) Current assets, loans and advances:			
	(a) Inventories		800	
	(b) Sundry debtors		1,000	
	(c) Cash balance		550	
	(d) Other current assets		—	
	(e) Loans and advances (Advance tax)		200	
			2,550	
	Less: Current Liabilities and Provisions :			
	(a) Liabilities		240	
	(b) Provisions			
	Provision for Taxation	180		
	Proposed Dividend	300	480	
			720	
	Net current assets			1,830
	(4) Miscellaneous expenditure			—
	(to the extent not written off or adjusted)			
	TOTAL			5,830

Profit and Loss Account
for the year ended 31st March, 2009 (Rs. in lakhs)

Sales and other income (3,500 – 100)	3,400
Cost of goods sold including operating expenses and depreciation (2,740 – 150 – 250)	(2,340)
Restructuring cost	(150)
Interest charges	(300)
Foreign exchange loss	(250)
Profit before taxation	360
Provision for tax (@ 50%)	(180)
Net Profit	180
Balance brought forward from previous year	360
Profit Available for Appropriation	540
Proposed Dividend	(300)
Balance Carried Forward	240

Current year profit after tax is only Rs. 180 lakhs as against the proposed dividend of Rs. 300 lakhs. Hence, in order to ensure sufficient compliance with section 205 of the Companies Act, 1956, past profits are utilized to make up the shotfall (assuming that there are no arrears of depreciation).

Note on Accounts: The royalty receivable in US Dollars for supply of know-how to a company in South-East Asia amounting to Rs. 100 lakhs has not been recognized as exchange permission has been denied to the company in South-East Asia for remitting the same.

Notes :

1. In the absence of any information regarding interest on foreign currency loan taken for financing purchase of fixed assets, no provision has been made for interest liability.
2. Deferred tax for the timing difference arising due to treatment of exchange loss on repayment of principal portion of the foreign currency loan is to be accounted for in accordance with AS 22 'Accounting for Taxes on Income'. In the above solution, the exchange loss on repayment of principal amount has been charged to profit and loss account. However, as per Section 43 A of the Income Tax Act, such exchange loss is required to be capitalized and depreciation is to be provided for. In the absence of information regarding nature of fixed asset, the rate of depreciation under Income Tax Act cannot be determined. Hence, the effect of AS 22 has not been disclosed in the redrafted financial statements.
3. Schedule VI to the Companies Act, 1956, provides that the exchange differences arising on repayment of liabilities incurred for the purpose of acquiring fixed assets should be adjusted in the carrying amount of respective fixed assets. The revised AS 11 (2003), however, does not require the adjustment of exchange differences in the carrying amount of fixed assets, and such exchange differences are required to be recognized in the statement of profit and loss since it is felt that this treatment is conceptually preferable to that required in Schedule VI.

   The above answer has been given according to revised AS 11 (2003).
4. It has been assumed that restructuring costs are of revenue nature and thus are allowed for tax purposes.

Q17. A Ltd. and B Ltd. were amalgamated on and from 1st April, 2009. A new company C Ltd. was formed to take over the business of the existing companies. The Balance Sheets of A Ltd. and B Ltd. as on 31st March, 2009 are given below :

(Rs. in lakhs)

Liabilities	A Ltd.	B Ltd.	Assets	A Ltd.	B Ltd.
Share Capital			Fixed Assets		
Equity Shares of Rs. 100 each	800	750	Land and Building	550	400
12% Preference shares of Rs.100 each	300	200	Plant and Machinery	350	250
Reserves and Surplus			Investments	150	50
Revaluation Reserve	100	150	Current Assets,		
General Reserve	150	170	Loans and Advances		
Investment Allowance	50	50	Stock	350	250
Reserve					
Profit and Loss Account	50	30	Sundry Debtors	250	300
Secured Loans			Bills Receivable	50	50
10% Debentures (Rs. 100 each)	60	30	Cash and Bank	300	200
Current Liabilities and provisions					
Sundry Creditors	270	120			
Bills Payable	150	70		—	—
	2,000	1,500		2,000	1,500

Additional Information :

(1) 10% Debentureholders of A Ltd. and B Ltd. are discharged by C Ltd. issuing such number of its 15% Debentures of Rs. 100 each so as to maintain the same amount of interest.

(2) Preference shareholders of the two companies are issued equivalent number of 15% preference shares of C Ltd. at a price of Rs. 150 per share (face value of Rs. 100).

(3) C Ltd. will issue 5 equity shares for each equity share of A Ltd. and 4 equity shares for each equity share of B Ltd. The shares are to be issued @ Rs. 30 each, having a face value of Rs. 10 per share.

(4) Investment allowance reserve is to be maintained for 4 more years.

Prepare the Balance Sheet of C Ltd. as on 1st April, 2009 after the amalgamation has been carried out on the basis of Amalgamation in the nature of purchase.

Answer 17.

Balance Sheet of C Ltd. as at 1st April, 2009

(Rs.In lakhs)

Liabilities		**Amount**	**Assets**	**Amount**
SHARE CAPITAL			FIXED ASSETS	
70,00,000 Equity shares of Rs.10 each		700	Goodwill	20
			Land and Building	950
5,00,000 Preference shares of Rs. 100 each (all the above shares are allotted as fully paid-up pursuant to contracts without payment being received in cash)		500	Plant and Machinery	600
			INVESTMENTS	200
			CURRENT ASSETS, LOANS AND ADVANCES	
RESERVES AND SURPLUS			A. Current Assets	
Securities Premium Account		1,650	Stock	600
Investment Allowance Reserve		100	Sundry debtors	550
SECURED LOANS			Cash and Bank	500
15% Debentures		60	B. Loans and Advances	
UNSECURED LOANS		—	Bills Receivable	100
CURRENT LIABILITIES AND PROVISIONS			MISCELLANEOUS EXPENDITURE (to the extent not written off or adjusted)	
A Current Liabilities Acceptances	220		Amalgamation Adjustment Account	100
Sundry Creditors	390			
B Provisions	—	610		
		3,620		3,620

Working Notes :

(Rs. in lakhs)

	A Ltd.	**B Ltd.**
(1) Computation of Purchase consideration		
(a) Preference shareholders:		
$\left(\frac{3,00,00,000}{100}\text{ i.e. } 3,00,000 \text{ shares}\right) \times \text{Rs. } 150 \text{ each}$	450	
$\left(\frac{2,00,00,000}{100}\text{ i.e. } 2,00,000 \text{ shares}\right) \times \text{Rs. } 150 \text{ each}$		300
(b) Equity shareholders:		
$\left(\frac{8,00,00,000 \times 5}{100}\text{ i.e. } 40,00,000 \text{ shares}\right) \times \text{Rs. } 30 \text{ each}$	1200	

$\left(\frac{7,50,00,000\times 4}{100}\text{ i.e. }30,00,000\text{ shares}\right)\times\text{Rs. }30\text{ each}$	900			
Amount of Purchase Consideration	1,650	1,200		
(2) Net Assets Taken Over				
Assets taken over:				
Land and Building	550	400		
Plant and Machinery	350	250		
Investments	150	50		
Stock	350	250		
Sundry Debtors	250	300		
Bills receivable	50	50		
Cash and bank	300	200		
	2,000	1,500		
Less: Liabilities taken over:				
Debentures	40		20	
Sundry Creditors	270		120	
Bills payable	150		70	
		460		210
Net assets taken over		1,540		1,290
Purchase consideration		1,650		1,200
Goodwill		110		—
Capital reserve			90	

Note:

Since Investment Allowance Reserve is to be maintained for 4 more years, it is carried forward by a corresponding debit to Amalgamation Adjustment Account in accordance with AS-14.

Q18. The following are the Balance Sheets of Big Ltd. and Small Ltd. for the year ending on 31st March, 2009. (Figures in crores of rupees):

	Big Ltd.	**Small Ltd.**
Equity share capital – in equity shares of Rs. 10 each	**50**	**40**
Preference share capital – in 10% preference shares of Rs. 100 each	**—**	**60**
Reserves and Surplus	**200**	**150**
	250	**250**
Loans – Secured	**100**	**100**
Total funds	**350**	**350**
Applied for: Fixed assets at cost less depreciation	**150**	**150**
Current assets less current liabilities	**200**	**200**
	350	**350**

The present worth of fixed assets of Big Ltd. is Rs. 200 crores and that of Small Ltd. is Rs. 429 crores. Goodwill of Big Ltd. is Rs. 40 crores and of Small Ltd. is 75 crores.

Small Ltd. absorbs Big Ltd. by issuing equity shares at par in such a way that intrinsic net worth is maintained.

Goodwill account is not to appear in the books. Fixed assets are to appear at old figures.

(a) Show the Balance Sheet after absorption.

(b) Draft a statement of valuation of shares on intrinsic value basis and prove the accuracy of your workings.

Answer18. **Small Ltd.**

Balance Sheet as at 1st April, 2009

	Schedule No.	(Rs.in crores)	
I SOURCES OF FUNDS			
(1) Shareholders' funds:			
(a) Capital	A	125	
(b) Reserves and surplus	B	375	
			500
(2) Loan funds:			
Secured loans	C		200
TOTAL			700
II APPLICATION OF FUNDS			
(1) Fixed assets:			
Net block	D		300
(2) Investments			–
(3) Net current assets	E		400
TOTAL			700
(Rs. in Crores)			

Schedules to Accounts:

A. Share Capital:

6.5 crores equity shares of Rs. 10 each (of the above shares, 2.5 crores equity shares are allotted as fully paid-up for consideration other than cash)		65
60 lakhs 10% Preference shares of Rs. 100 each	60	
		125

B. Reserves and Surplus:

As per last Balance Sheet	150
Capital Reserve	225
	375

C. Secured Loans:

As per last Balance Sheet	100
Taken over on absorption of Big Ltd.	100
	200

D Fixed Assets:

As per last Balance Sheet	150
Taken over on absorption of Big Ltd.	150
	300

E Net Current Assets:

As per last Balance Sheet	200
Taken over on absorption of Big Ltd.	200
	400

(b) **Valuation of shares on intrinsic value basis**

(i)	**Big Ltd.**	**Small Ltd.**
	(Rs. in crores)	
Equity share capital	50	40
Reserves and Surplus	200	150
250 190		
Goodwill agreed upon	40	75
Increase in the value of fixed assets		
(Present worth less book value)	50	279
	340	544

(ii)	**Big Ltd.**	**Small Ltd.**
Number of Equity shares	5 crores	4 crores
Intrinsic value per equity share	Rs. 68	Rs. 136
(iii) Ratio of intrinsic value of shares in the two companies	1 : 2	

Since the shares are to be issued at par, the number of equity shares of Rs. 10 each to be issued to maintain the intrinsic net worth = 5 crores /2 = 2.5 crores

(iv) Statement to prove the accuracy of workings

		(Rs. in crores)
(1)	Equity share capital (after absorption)	65
	Reserves and Surplus (after absorption)	375
		440
	Add: Unrecorded value of goodwill (40+75)	115
	Add: Unrecorded incremental value of fixed assets (50+279)	329
		884

(2)	Number of equity shares	6.5 crores
(3)	Intrinsic value of an equity share (884/6.5)	Rs. 136

Working Note :

Calculation of Capital Reserve on Absorption	(Rs. in crores)
Fixed Assets taken over	150
Net current assets taken over	200
	350
Less: Secured loans taken over	100
Net Assets taken over	250
Less: Purchase consideration	25
	225

Q19. AB Ltd. and MB Ltd. decide to amalgamate and to form a new company AM Ltd. The following are their balance sheets as at 31.3.2009:

Liabilities	AB Ltd.	MB Ltd.	Assets	AB Ltd.	MB Ltd.
Share Capital	10,00,000	6,00,000	Fixed Assets	7,50,000	2,00,000
(Rs. 100) each			Investments:		
General Reserve	1,00,000	50,000	1,500 Shares in MB	3,50,000	—
Investment Allowance	40,000	30,000	4,000 Shares in AB	—	5,00,000
Reserve					
12% Debentures			Current Assets	4,00,000	1,00,000
(Rs. 100 each)	3,00,000	1,00,000			
Sundry Creditors	60,000	20,000		—	—
	15,00,000	8,00,000		15,00,000	8,00,000

Calculate the amount of purchase consideration for AB Ltd. and MB Ltd. and draw up the balance sheet of AM Ltd. after considering the following:

(a) **Assume amalgamation is in the nature of purchase.**

(b) **Fixed assets of AB Ltd. are to be reduced by Rs. 50,000 and that of MB Ltd. are to be taken at Rs. 3,00,000.**

(c) **2% debentureholders of AB Ltd. and MB Ltd. are discharged by AM Ltd. by issuing such number of its 15% debentures of Rs. 100 each so as to maintain the same amount of interest.**

(d) **Shares of AM Ltd. are of Rs. 100 each.**

Also show, how the investment allowance reserve will be treated in the Financial Statement assuming the Reserve will be maintained for 3 years.

Answer 19.

(i) **Calculation of Purchase consideration**

Value of Net Assets of AB Ltd. and MB Ltd. as on 31st March, 2009

	AB Ltd. Rs.		MB Ltd. Rs.	
Assets taken over:				
Fixed Assets	7,00,000		3,00,000	
Current Assets	4,00,000	11,00,000	1,00,000	4,00,000
Less: Liabilities taken over:				
Debentures	2,40,000*		80,000**	
Sundry Creditors	60,000	3,00,000	20,000	1,00,000
	8,00,000		**3,00,000**	

$$*3,00,000 \times \frac{12}{100} \times \frac{100}{15} = \text{Rs. } 2,40,000$$

$$** \ 1,00,000 \times \frac{12}{100} \times \frac{100}{15} = \text{Rs. } 80,000$$

(ii) Value of Shares of AB Ltd. and MB Ltd.

The value of shares of AB Ltd. is Rs. 8,00,000 plus 1/4 of the value of the shares of MB Ltd.

Similarly, the value of shares of MB Ltd. is Rs. 3,00,000 plus 2/5 of the value of shares of AB Ltd.

Let a denote the value of shares of AB Ltd. and m denote the value of shares of MB Ltd. then

$$a = 8,00,000 + \frac{1}{4} m \text{ ; and}$$

$$M = 3,00,000 + \frac{2}{5} a.$$

Substituting the value of m,

$$a = 8,00,000 + \frac{1}{4}\left(3,00,000 \frac{2}{5} a\right)$$

$$a = 8,00,000 + 75,000 + \frac{1}{10} a$$

$$\frac{9}{10a} = 8,75,000$$

$$a = 9,72,222$$

$$m = 3,00,000 + \frac{2}{5}(9,72,222)$$

$$m = 6,88,889$$

(iii) Amount of Purchase Consideration

	AB Ltd. Rs.	MB Ltd. Rs.
Total value of shares (as determined above)	9,72,222	6,88,889
Less: Internal investments:		
$\frac{2}{5}$ for shares held by MB Ltd.	3,88,889	
$\frac{1}{4}$ for shares held by AB Ltd.	—	1,72,222
Amount due to outsiders	5,83,333	5,16,667

Purchase Consideration will be satisfied by AM Ltd. as follows:

	AB Ltd. Rs.	MB Ltd. Rs.
In shares (of Rs. 100 each)	5,83,300	5,16,600
In cash	33	67

(iv) Net Amount of Goodwill/Capital Reserve

	Rs.	Rs.
Total Purchase Consideration		
AB Ltd.	5,83,333	
MB Ltd.	5,16,667	11,00,000
Less: Net Assets taken over		
AB Ltd.	8,00,000	
MB Ltd.	3,00,000	11,00,000
		Nil

(Alternatively, the calculations may be made separately for both the companies)

Balance Sheet of AM Ltd.as at 31st March, 2009

Liabilities	Amount Rs.	Assets	Amount Rs.
Share Capital 10,999 shares of Rs. 100 each	10,99,900	Goodwill	—
(All the above shares are allotted as fully paid-up for consideration other than cash)		Fixed Assets Investments	10,00,000 —
Investment Allowance Reserve	70,000	Current Assets	4,99,900
15% Debentures	3,20,000	(5,00,000 – 33 – 67)	
Sundry Creditors	80,000	Miscellaneous Expenditure	
		(to the extent not written off or adjusted): Amalgamation Adjustment Account	70,000
	15,69,900		15,69,900

Q20. The Balance Sheets of Big Ltd. and Small Ltd. as at 31.3.09 (Rs. In lakhs)

	Big Ltd. Rs.	Small Ltd. Rs.		Big Ltd. Rs.	Small Ltd. Rs.
Share Capital	**40**	**15**	**Sundry Assets (including cost of shares)**	**56**	**20**
Profit & Loss A/c	**7.5**	**—**	**Goodwill**	**4**	**5**
Sundry Creditors	**12.5**	**12.5**	**Profit and Loss A/c**	**—**	**2.5**
	60.0	**27.5**		**60.0**	**27.5**

Additional Information :

(i) The two companies agree to amalgamate and form a new company, Medium Ltd.

(ii) Big Ltd. holds 10,000 shares in Small Ltd. acquired at a cost of Rs.2,50,000 and Small Ltd. holds 5,000 shares in Big Ltd. acquired at a cost of Rs.7,00,000.

(iii) The shares of Big Ltd. are of Rs.100 and are fully paid and the shares of Small Ltd. are of Rs.50 each on which Rs.30 has been paid-up.

(iv) It is agreed that the goodwill of Big Ltd. would be valued at Rs.1,50,000 and that of Small Ltd. at Rs.2,50,000.

(v) The shares which each company holds in the other are to be valued at book value having regard to the goodwill valuation decided as given in (iv).

(vi) The new shares are to be of a nominal value of Rs.50 each credited as Rs.25 paid.

You are required to:

(i) Prepare the Balance Sheet of Medium Ltd., as at 31st March, 2009 after giving effect to the above transactions; and

(ii) Prepare a statement showing the shareholdings in the new company attributable to the shareholders of the merged companies.

Answer 20.

(i) **Balance Sheet of Medium Ltd. as on 31st March, 2009**

Liabilities	**Rs.**	**Assets**	**Rs.**
1,82,000 shares of Rs. 50/- each, Rs. 25 paid up [Issued for consideration other than cash]	45,50,000	Goodwill (Rs. 1,50,000+Rs. 2,50,000)	4,00,000
		Sundry Assets	4,00,000
Sundry Creditors	25,00,000	(Rs. 53,50,000+ Rs. 13,00,000)	66,50,000
	70,50,000		70,50,000

(ii) **Statement of Shareholding in Medium Ltd.**

	Big Ltd. Rs.	**Small Ltd. Rs.**
Total value of Assets	44,20,513	8,52,564
Less: Pertaining to shares held by the other company	5,52,564	1,70,513
	38,67,949	6,82,051
Rounded off to	38,67,950	6,82,050
Shares of new company (at Rs. 25 per share)	1,54,718	27,282

Total purchase consideration to be paid to Big Ltd and Small Ltd.

(Rs.38,67,950 + Rs.6,82,050)= Rs.45,50,000

Number of shares in Big Ltd. (40,00,000/100)	40,000 shares
Number of shares in Small Ltd. (15,00,000/30)	50,000 shares
Holding of Small Ltd. in Big Ltd. (5,000/40,000)	1/8
Holding of Big Ltd. in Small Ltd. (10,000/50,000)	1/5
Number of shares held by outsiders in Big Ltd. (40,000 – 5,000) =	35,000
Number of shares held by outsiders in Small Ltd. (50,000 – 10,000) =	40,000

Workings Note:

Calculation of Book Value of Shares

	Big Ltd Rs.	**Small Ltd.** Rs.
Goodwill	1,50,000	2,50,000
Sundry Assets other than shares in other company (56,00,000 – 2,50,000)(20,00,000 – 7,00,000)	53,50,000	13,00,000
	55,00,000	15,50,000
Less: Sundry Creditors	12,50,000	12,50,000
	42,50,000	3,00,000

If "x" is the Book Value of Assets of Big Ltd and "y" of Small Ltd.

$$x = 42{,}50{,}000 + \frac{1}{5}y$$

$$y = 3{,}00{,}000 + \frac{1}{8}x$$

$$x = 42{,}50{,}000 + \frac{1}{5}\left(3{,}00{,}000 + \frac{1}{8}x\right)$$

$$= 42{,}50{,}000 + 60{,}000 + \frac{1}{40}x$$

$$\frac{39}{40}x = 43{,}10{,}000$$

$$x = 43{,}10{,}000 \times \frac{40}{39}$$

$$x = 44{,}20{,}513 \text{ (approx.)}$$

$$y = 3{,}00{,}000 + \frac{1}{8}(44{,}20{,}513)$$

$$= 3{,}00{,}000 + 5{,}52{,}564$$

$$= \text{Rs. } 8{,}52{,}564 \text{ (approx.)}$$

Book Value of one share of Big Ltd. $= \dfrac{44{,}20{,}513}{40{,}000} =$ Rs. 110.513 (approx)

Book Value of one share of Small Ltd. $= \dfrac{8{,}25{,}564}{50{,}000} =$ Rs. 17.05 (approx).

Q21. The Balance Sheets of R Ltd. for the years ended on 31.3.2007, 31.3.2008 and 31.3.2009 are as follows:

Liabilities	31.3.2007 Rs.	31.3.2008 Rs.	31.3.2009 Rs.
3,20,000 Equity Shares of Rs. 10 each fully paid	32,00,000	32,00,000	32,00,000
General Reserve	24,00,000	28,00,000	32,00,000
Profit and Loss Account	2,80,000	3,20,000	4,80,000
Creditors	12,00,000	16,00,000	20,00,000
	70,80,000	79,20,000	88,80,000
Assets	**31.3.2007 Rs.**	**31.3.2008 Rs.**	**31.3.2009 Rs.**
Goodwill	20,00,000	16,00,000	12,00,000
Building and Machinery(Less: Depreciation)	28,00,000	32,00,000	32,00,000
Stock	20,00,000	24,00,000	28,00,000
Debtors	40,000	3,20,000	8,80,000
Bank Balance	2,40,000	4,00,000	8,00,000
	70,80,000	79,20,000	88,80,000

Actual valuation were as under:

	31.3.2007 Rs.	31.3.2008 Rs.	31.3.2009 Rs.
Building and Machinery	36,00,000	40,00,000	44,00,000
Stock	24,00,000	28,00,000	32,00,000
Net Profit (including opening balance) after writing off depreciation and goodwill, tax provision and transfer to General Reserve	8,40,000	12,40,000	16,40,000

Capital employed in the business at market values at the beginning of 2006-07 was Rs. 73,20,000, which included the cost of goodwill. The normal annual return on Average Capital employed in the line of business engaged by R Ltd. is 12½%.

The balance in the General Reserve account on 1st April, 2006 was Rs. 20 lakhs.

The goodwill shown on 31.3.2009 was purchased on 1.4.2006 for Rs. 20,00,000 on which date the balance in the Profit and Loss Account was Rs. 2,40,000. Find out the average capital employed each year.

Goodwill is to be valued at 5 years purchase of super profits (Simple average method). Also find out the total value of the business as on 31.3.2009.

Answer 21.

Note:

1. Since goodwill has been paid for, it is taken as part of capital employed. Capital employed at the end of each year is shown below.
2. Assumed that the building and machinery figure as revalued is after considering depreciation.

	31.3.2007 Rs.	**31.3.2008** Rs.	**31.3.2009** Rs.
Goodwill	20,00,000	16,00,000	12,00,000
Building and Machinery (revalued)	36,00,000	40,00,000	44,00,000
Stock (revalued)	24,00,000	28,00,000	32,00,000
Debtors	40,000	3,20,000	8,80,000
Bank Balance	2,40,000	4,00,000	8,00,000
Total Assets	82,80,000	91,20,000	1,04,80,000
Less: Creditors	12,00,000	16,00,000	20,00,000
Closing Capital	70,80,000	75,20,000	84,80,000
Opening Capital	73,20,000	70,80,000	75,20,000
	1,44,00,000	1,46,00,000	1,60,00,000
Average Capital	72,00,000	73,00,000	80,00,000

Maintainable profit has to be found out after making adjustments as given below :

	31.3.2007 Rs.	**31.3.2008** Rs.	**31.3.2009** Rs.
Net Profit as given	8,40,000	12,40,000	16,40,000
Less: Opening Balance	2,40,000	2,80,000	3,20,000
6,00,000	9,60,000	13,20,000	
Add: Under valuation of closing stock	4,00,000	4,00,000	4,00,000
10,00,000	13,60,000	17,20,000	
Less: Adjustment for valuation in opening stock	—	4,00,000	4,00,000
10,00,000	9,60,000	13,20,000	
Add: Goodwill written-off	—	4,00,000	4,00,000
10,00,000	13,60,000	17,20,000	
Add: Transfer to Reserves	4,00,000	4,00,000	4,00,000
14,00,000	17,60,000	21,20,000	
Less: 12½% Normal Return	9,00,000	9,12,500	10,00,000
Super Profit	5,00,000	8,47,500	11,20,000

Average super profits = (Rs.5,00,000 + Rs.8,47,500 + Rs.11,20,000) / 3

= 24,67,500 / 3 = Rs 8,22,500

Goodwill = 5 years purchase = Rs. 8,22,500 × 5 = Rs. 41,12,500.

	Rs.
Total Net Assets (31/3/2009)	84,80,000
Less: Goodwill	12,00,000
	72,80,000
Add: Goodwill	41,12,500
Value of Business	1,13,92,500

Q22. P Limited is considering the acquisition of R Limited. The financial data at the time of acquisition being:

	P Ltd.	**R Ltd.**
Net profit after tax (Rs. in lakhs)	**60**	**12**
Number of shares (lakhs)	**12**	**5**
Earning per share (Rs.)	**5**	**2.40**
Market price per share (Rs.)	**150**	**48**
Price earning ratio	**30**	**20**

It is expected that the net profit after tax of the two companies would continue to be Rs.72 lakhs even after the amalgamation.

Explain the effect on EPS of the merged company under each of the following situations:

(i) P Ltd. offers to pay Rs.60 per share to the shareholders of R Ltd.

(ii) P Ltd. offers to pay Rs.78 per share to the shareholders of R Ltd.

The amount in both cases is to be paid in the form of shares of P Ltd.

Answer 22.

(i) In this case, P Ltd. offers to pay Rs.60 per share.

The share exchange ratio would be $\frac{60}{150} = 0.4$

It means, P Ltd. would give 0.4 shares for every one share of R Ltd. In other words, P Ltd. would give 2 shares for 5 shares of R Ltd.

The total number of shares to be issued by P Ltd. to R Ltd.

= 5,00,000 × 0.4 = 2,00,000 shares

or

$5,00,000 \times \frac{2}{5}$ = 2,00,000 shares

Total number of shares of P Ltd. after acquisition of R Ltd.

= 12,00,000 + 2,00,000 = 14,00,000 shares

Calculation of E.P.S. of the amalgamated company

$$= \frac{\text{Total Net Profit after Interest and Tax}}{\text{Total Number of shares}} = \frac{72,00,000}{14,00,000} = \text{Rs. 5.14 per share}$$

After amalgamation, The EPS of P Ltd., will improve from Rs.5 to Rs.5.14 whereas EPS of former shareholders of R Ltd would reduce from present 2.40 per share to 5.14 × 0.4 = Rs.2.056 per share after merger.

(ii) In this case, P Ltd. offers Rs.78 per share to the shareholders of R Ltd.

The Exchange Ratio would be $\frac{78}{150} = 0.52$ shares of P Ltd. for each share of R Ltd. In other words, P Ltd would give 52 shares for per 100 shares of R Ltd.

P Ltd would issue 5,00,000 × 0.52 = 2,60,000 shares to shareholders of R Ltd.

E.P.S. of the Merged Company $= \frac{72,00,000}{12,00,000 + 2,60,000} = 4.93$

After Merger, there is a dilution in the E.P.S., of P Ltd. from 5 to 4.93.

After Merger E.P.S. of former shareholders of R Ltd.= 4.93 ´ 0.52 = 2.56

There is a gain of Re. 0.16 in E.P.S. of merged company in comparison to E.P.S. of R Ltd. of Rs.2.40 before merger.

Comments :

Initial increase in and decrease in earnings per share are possible in both cases of Merger. Generally, the dilution in E.P.S. will occur wherever the Price Earnings ratio of acquired company calculated on the basis of price paid exceed the P/E ratio of acquired company and vice-versa.

In Situation (i) - The price offered by P Ltd. per share of R Ltd. is Rs.60 and E.P.S. of R Ltd. is 2.4, which would become the earnings of P Ltd. after merger.

Price Earning (P/E) Ratio of P Ltd. after merger $= \frac{60}{2.40} = 25$. It is lower than the P/E Ratio of P Ltd. before merger i.e., 30, the E.P.S. of P Ltd. after merger increases to Rs.5.14.

In Situation (ii) -The price earnings (P/E) ratio offered for Merger is $\frac{78}{2.4} = 32.5$ which is higher than P/E Ratio of P Ltd. before Merger. Hence, the E.P.S. of P Ltd after merger would get diluted.

Q23.

	Bat Ltd. Rs.	Ball Ltd. Rs.		Bat Ltd. Rs.	Ball Ltd. Rs.
Share Capital	**1,60,000**	**2,00,000**	**Investments**		
(Shares of Rs. 10 each)			**Shares in Ball Ltd.**	**1,96,000**	**—**
Profit and Loss account	**50,000**	**60,000**	**Debtors**	**—**	**1,20,000**
Creditors	**—**	**16,000**	**Stock**	**—**	**80,000**
			Cash at Bank	**—**	**70,000**
	—	**—**	**Cash in hand**	**14,000**	**6,000**
	2,10,000	**2,76,000**		**2,10,000**	**2,76,000**

Particulars of Bat Ltd.:

(1) This company was formed on 1.4.2008.

(2) It acquired the shares of Ball Ltd. as under :

Date of Acquisition	**No. of Shares**	**Cost Rs.**
1.4.2008	**8,000**	**1,10,000**
31.7.2008	**6,000**	**86,000**

(3) The shares purchased on 31.7.2008 are ex-dividend and ex-bonus from existing holders.

(4) On 31.7.2008 dividend at 10% was received from Ball Ltd. and was credited to Profit and Loss Account.

(5) On 31.7.2008 it received bonus shares from Ball Ltd. in the ratio of one share on every four shares held.

(6) Bat Ltd. incurred an expenditure of Rs. 500 per month on behalf of Ball Ltd. and this was debited to the Profit and Loss Account of Bat Ltd., but nothing has been done in the books of Ball Ltd.

(7) The balance in the Profit and Loss Account as on 31.3.2009 included Rs. 36,000 being the net profit made during the year.

(8) Dividend proposed for 2008-09 at 10% was not provided for as yet.

Particulars of Ball Ltd:

(1) The balance in the Profit and Loss Account as on 31.3.2009 is after the issue of bonus shares made on 31.7.2008.

(2) The net profit made during the year is Rs. 24,000 including Rs. 6,000 received from insurance company in settlement of the claim towards loss of stock by fire on 30.06.2008 (Cost Rs. 10,800 included in opening stock).

(3) Dividend proposed for 2008-09 at 10% was not provided for in the accounts.

Prepare the Consolidated Balance Sheet of Bat Ltd. as on 31.3.2009.

Answer 23.

Liabilities	**Amount Rs.**	**Assets**	**Amount Rs.**
Share Capital		Stock	80,000
(Shares of Rs. 10 each)	1,60,000	Debtors	1,20,000
Minority Interest	50,800	Cash at Bank	70,000
Capital Reserve	3,040	Cash in hand	20,000
Profit and Loss Account	44,160		
Creditors	16,000		
Proposed Dividend	16,000		—
	2,90,000		2,90,000

Working Notes :

(1) Analysis of profits of Ball Ltd.

			Capital Profits Rs.	Revenue Profits Rs.
Profit and Loss Account on 1.4.2008				
(60,000 – 24,000)			36,000	
Profit for the year	24,000			
Add back: Loss by fire	4,800			
	28,800			
Less: Expenses not considered	6,000			
	22,800			
Pre-acquisition profits $= \frac{4}{12} \times 22{,}800 =$	7,600			
Less : Loss in pre-acquisition period =	4,800	2,800		
Post-acquisition profits				
$\left(\frac{8}{12} \times 22{,}800\right)$				15,200
			38,800	15,200
Bat Ltd.'s share (80%*)			31,040	12,160
Minority's share (20%)			7,760	3,040

$$* \frac{8{,}000 + 6{,}000 + \text{Bonus shares } \frac{8{,}000}{4} \text{ i.e. } 2{,}000}{20{,}000} \times 100$$

$$= \frac{16{,}000}{20{,}000} \times 100 = 80\%$$

(2) Minority interest

	Rs.
Share capital	40,000
Capital profits	7,760
Revenue profits	3,040
	50,800

(3) Cost of control

		Rs.
Face value of investments	1,60,000	
Capital profits	31,040	1,91,040
Investment in Ball Ltd.	1,96,000	
Less: Pre-acquisition dividend	8,000	(1,88,000)
Capital Reserve		3,040

(4) Profit and Loss Account – Bat Ltd.	**Rs.**
Balance	50,000
Less: Pre-acquisition dividend wrongly credited	8,000
	42,000
Less: Proposed dividend	16,000
	26,000
Add: Expenses of Ball Ltd. written back	6,000
Add: Share in Ball Ltd.	12,160

Q24. From the following Balance Sheets of a group of companies and the other information provided, draw up the Consolidated Balance Sheet as on 31.3.2009. Figures given are in Rupees Lakhs :

Balance Sheets as on 31.3.2009

	X	Y	Z		X	Y	Z
Shares capital (in shares of Rs. 10 each)	**300**	**200**	**100**	**Fixed Assets less depreciation**	**130**	**150**	**100**
Reserves	**50**	**40**	**30**	**Cost of investment in Y Ltd.**	**180**	**—**	**—**
Profit and loss balance	**60**	**50**	**40**	**Cost of investment in Z Ltd.**	**40**	**—**	**—**
Bills payables	**10**	**—**	**5**	**Cost of investment in Z Ltd.**	**—**	**80**	**—**
Creditors	**30**	**10**	**10**	**Stock**	**50**	**20**	**20**
Y Ltd. balance	**—**	**—**	**15**	**Debtors**	**70**	**10**	**20**
Z Ltd. balance	**50**	**—**	**—**	**Bills receivables**	**—**	**10**	**20**
				Z Ltd. balance	**—**	**10**	**—**
				X Ltd. balance	**—**	**—**	**30**
	—	**—**	**—**	**Cash and bank balance**	**30**	**20**	**10**
	500	**300**	**200**		**500**	**300**	**200**

X Ltd. holds 1,60,000 shares and 30,000 shares respectively in Y Ltd. and Z Ltd.; Y Ltd. holds 60,000 shares in Z Ltd. These investments were made on 1.7.2008 on which date the provision was as follows:

	Y Ltd.	**Z Ltd.**
Reserves	**20**	**10**
Profit and loss account	**30**	**16**

- **In December, 2008 Y Ltd. invoiced goods to X Ltd. for Rs. 40 lakhs at cost plus 25%. The closing stock of X Ltd. includes such goods valued at Rs. 5 lakhs.**
- **Z Ltd. sold to Y Ltd. an equipment costing Rs. 24 lakhs at a profit of 25% on selling price on 1.1.2009. Depreciation at 10% per annum was provided by Y Ltd. on this equipment.**
- **Bills payables of Z Ltd. represent acceptances given to Y Ltd. out of which Y Ltd. had discounted bills worth Rs. 3 lakhs.**

- **Debtors of X Ltd. Include Rs. 5 lakhs being the amount due from Y Ltd.**
- **X Ltd. proposes dividend at 10%.**

Answer 24.

Consolidated Balance Sheet of X Ltd. and its subsidiaries Y Ltd. and Z Ltd.as at 31st March, 2009

(Rs. in lakhs)

Liabilities		Amount	Assets	Amount	
Share capital		300.00	Fixed Assets		
Minority Interest			X Ltd.	130.00	
Y Ltd.	63.08		Y Ltd.	150.00	
Z Ltd.	16.22	79.30	Z Ltd.	100.00	
Capital Reserve		13.40		380.00	
			Less: Unrealised profit	7.80	372.20
Other Reserves		81.60	Stock		
Profit and Loss Account		56.90	X Ltd.	50.00	
Bills Payables			Y Ltd.	20.00	
X Ltd.	10.00		Z Ltd.	20.00	
Y Ltd.	5.00		90.00		
	15.00		Less: Unrealised profit	1.00	89.00
Less: Mutual indebtedness	2.00	13.00	Debtors		
			X Ltd.	70.00	
Creditors			Y Ltd.	10.00	
X Ltd.	30.00		Z Ltd.	20.00	
Y Ltd.	10.00			100.00	
Z Ltd.	10.00		Less: Mutual	5.00	95.00
		50.00	indebtedness		
			Cash and Bank Balances		60.00
Less: Mutual	5.00	45.00	Bills Receivables		
indebtedness			Y Ltd.	10.00	
Current Account Balances			Z Ltd.	20.00	
X Ltd.	50.00			30.00	
Z Ltd.	15.00 65.00		Less: Mutual indebtedness	2.00	28.00
Less: Mutual	25.00				
indebtedness (10+30)	40.00				
Proposed Dividend		30.00			
		644.20			**644.20**

Working Notes :

(Rs. in lakhs)

		Capital Profit	Revenue Reserve	Revenue profit
(1)	Analysis of Profits of Z Ltd.			
	Reserves on 1.7.2008	10.00		
	Profit and Loss A/c on 1.7.2008	16.00		
	Increase in Reserves		20.00	
	Increase in Profit	—	—	24.00
		26.00	20.00	24.00
	Less: Minority Interest (10%)	2.60	2.00	2.40
		23.40	18.00	21.60
	Share of X Ltd.	7.80	6.00	7.20
	Share of Y Ltd.	15.60	12.00	14.40
(2)	Analysis of Profits of Y Ltd.			
	Reserves on 1.7.2008	20.00		
	Profit and Loss A/c on 1.7.2008	30.00		
	Increase in Reserves		20.00	
	Increase in Profit	—	—	20.00
		50.00	20.00	20.00
	Share in Z Ltd.	—	12.00	14.40
		50.00	32.00	34.40
	Less: Minority Interest (20%)	10.00	6.40	6.88
	Share of X Ltd.	40.00	25.60	27.52
(3)	Cost of Control			
	Investments in Y Ltd.			180.00
	Investments in Z Ltd.			120.00
				300.00
	Less: Paid up value of investments			
	in Y Ltd.	160.00		
	in Z Ltd.	90.00	250.00	
	Capital Profit			
	in Y Ltd.	40.00		
	in Z Ltd.	23.40	63.40	313.40
	Capital Reserve			13.40

		Y Ltd.	Z Ltd.
(4)	Minority Interest	**Y Ltd.**	**Z Ltd.**
	Share Capital	40.00	10.00
	Capital Profit	10.00	2.60
	Revenue Reserves	6.40	2.00
	Revenue Profits	6.88	2.40
		63.28	17.00
	Less: Unrealised profit on stock (20% of 1)	.20	
	Unrealised profit on equipment (10% of 7.8)	—	.78
		63.08	16.22
(5)	Unrealised Profit on equipment sale		
	Cost	24.00	
	Profit	8.00	
	Selling Price	32.00	
	Unrealised profit		
	$= 8 - 8 \times \frac{10}{100} \times \frac{3}{12} = 8.00 - 0.20 = 7.80$		
	Profit and Loss Account – X Ltd.		
	Balance	60.00	
	Less: Proposed Dividend	30.00	
	30.00		
	Share in Y Ltd.	27.52	
	Share in Z Ltd.	7.20	
	64.72		
	Less: Unrealised profit on equipment (90% of 7.8)	7.02	
		57.70	
	Less: Unrealised profit on stock $\left(5 \times \frac{25}{125} \times 80\%\right)$	.80	
		56.90	
(7)	Reserves – X Ltd.		
	X Ltd.	50.00	
	Share in Y Ltd.	25.60	
	Share in Z Ltd.	6.00	
		81.60	

Q25. From the following Profit and Loss Account of Kalyani Ltd., prepare a Gross Value Added Statement. Show also the reconciliation between Gross Value Added and Profit before Taxation.

Profit and Loss Account for the year ended 31st March, 2009

Income

	Notes	Amount	
		(Rs. in lakhs)	(Rs.in lakhs)
Sales			206.42
Other Income			10.20
			216.62
Expenditure			
Production and Operational Expenses	1	166.57	
Administration Expenses	2	6.12	
Interest and Other Charges	3	8.00	
Depreciation		5.69	186.38
Profit before Taxes			30.24
Provision for taxes			3.00
			27.24
Investment Allowance Reserve Written Back			0.46
Balance as per Last Balance Sheet			1.35
			29.05
Transferred to:			
General Reserve		24.30	
Proposed Dividend		3.00	27.30
Surplus Carried to Balance Sheet		1.75	
		29.05	

Notes:

(1)	Production and Operational Expenses		(Rs.in lakhs)
	Increase in Stock		30.50
	Consumption of Raw Materials		80.57
	Consumption of Stores+		5.30
	Salaries, Wages, Bonus and Other Benefits	12.80	
	Cess and Local Taxes		3.20
	Other Manufacturing Expenses		34.20
			166.57

(2) Administration expenses include inter-alia Audit fees of Rs. 1 lakh, Salaries and commission to directors Rs. 2.20 lakhs and Provision for doubtful debts Rs. 2.50 lakhs.

(3)	Interest and Other Charges:	(Rs.in lakhs)
	On Fixed Loans from Financial Institutions	3.90
	Debentures	1.80
	On Working Capital Loans from Bank	2.30
		8.00

Answer 25.

Kalyani Ltd.

Value Added Statement for the year ended 31st March, 2009

	Rs.in lakhs	Rs. in lakhs	%
Sales		206.42	
Less: Cost of bought in material and services:			
Production and operational expenses	150.57		
Administration expenses	3.92		
Interest on working capital loans	2.30	156.79	
Value Added by manufacturing and trading activities		49.63	
Add: Other income		10.20	
Total Value Added		59.83	

Application of Value Added:

To Pay Employees:			
Salaries, Wages, Bonus and other benefits		12.80	21.39
To Pay Directors:			
Salaries and Commission		2.20	3.68
To Pay Government:			
Cess and Local Taxes	3.20		
Income Tax	3.00	6.20	10.36
To Pay Providers of Capital:			
Interest on Debentures	1.80		
Interest on Fixed Loans	3.90		
Dividend	3.00		
		8.70	14.54
To Provide for maintenance and Expansion of the company:			
Depreciation	5.69		
General Reserve (24.30 – 0.46)	23.84		
Retained profit (1.75 – 1.35)	0.40	29.93	50.03
		59.83	100.00

Reconciliation between Total Value Added and Profit Before Taxation :

		(Rs. in lakhs)	(Rs. in lakhs)
Profit before tax			30.24
Add back:			
Depreciation		5.69	
Salaries, Wages, Bonus and other benefits		12.80	
Directors' Remuneration	2.20		
Cess and Local Taxes	3.20		
Interest on Debentures	1.80		
Interest on Fixed Loans	3.90		29.59
Total Value Added			59.83

Q26. From the following Profit and Loss Account of X Limited, prepare Gross Value Added Statement and show the reconciliation between Gross Value Added and Profit before taxation: Profit and Loss Account for the year ended 31st March, 2009

Income	**(Rs. in lakhs)**	**(Rs. in lakhs)**
Sales		**800**
Other Income		**50**
		850
Expenditure		
Production and Operational Expenses	**600**	
Administrative Expenses	**30**	
Interest and Other Charges	**30**	
Depreciation	**20**	**680**
Profit before taxes		**170**
Provision for taxes		**30**
		140
Balance as per last Balance Sheet		**10**
		150
Transferred to:		
General Reserve		**80**
Proposed Dividend		**20**
Surplus carried to Balance Sheet		**50**
		150

Break-up of some of the Expenditure is as follows:

Production and Operational Expenses:	
Consumption of Raw Materials and Stores	**320**
Salaries, Wages and Bonus	**60**
Cess and Local Taxes	**20**
Other Manufacturing Expenses	**200**
	600
Administrative Expenses:	
Audit Fee	**6**
Salaries and Commission to Directors	**8**
Provision for Doubtful Debts	**6**
Other Expenses	**10**
	30
Interest and other Charges:	
On Working Capital Loans from Bank	**10**
On Fixed Loans from ICICI	**15**
On Debentures	**5**
	30

Answer 26.

X Limited

Gross Value Added Statement for the year ended 31st March, 2009

	Rs. in lakhs	**Rs. in lakhs**
Sales		
Less: Cost of bought in material or services:		800
Production and Operational Expenses (320 + 200)	520	
Administrative Expenses (6 + 6 +10)	22	
Interest on working capital loans	10	552
Value added by manufacturing and trading activities		248
Add: Other Income		50
Total Value Added		298

Application of Value Added:

To Pay Employees:				%
Salaries, Wages and Bonus			60	20.14
To Pay Directors:				
Salaries and Commission			8	2.68
To Pay Government:				
Cess and Local taxes		20		
Income Tax		30	50	16.78

To	Pay Providers of Capital:			
	Interest on Debentures	5		
	Interest on Fixed Loans	15		
	Dividend	20	40	13.42
To	Provide for Maintenance and Expansion			
	of the Company: Depreciation	20		
	General Reserve	80		
	Retained Profit (50 – 10)	40	140	46.98
			298	100.00

Reconciliation between Gross Value Added and Profit before Taxation

	Rs. in lakhs	**Rs. in lakhs**
Profit before tax		170
Add back:		
Depreciation	20	
Salaries, Wages and Bonus	60	
Directors' Remuneration	8	
Cess and Local Taxes	20	
Interest on Debentures	5	
Interest on Fixed Loans	15	128
Total Value Added		298

Q27. What are the advantages of preparation of Value Added (VA) statements?

Answer 27.

Various advantages of preparation of Value Added (VA) Statements are as under:

1. Reporting on VA improves the attitude of employees towards their employing companies. This is because the VA statement reflects a broader view of the company's objectives and responsibilities.
2. VA statement makes it easier for the company to introduce a productivity linked bonus scheme for employees based on VA. The employees may be given productivity bonus on the basis of VA / Payroll Ratio.
3. VA based ratios (e.g. VA / Payroll, taxation / VA, VA / Sales etc.) are useful diagnostic and predictive tools. Trends in VA ratios, comparisons with other companies and international comparisons may be useful.
4. VA provides a very good measure of the size and importance of a company. To use sales figure or capital employed figures as a basis for company's rankings can cause distortion. This is because sales may be inflated by large bought-in expenses or a capital-intensive company with a few employees may appear to be more important than a highly skilled labour–intensive company.

5. VA statement links a company's financial accounts to national income. A company's VA indicates the company's contribution to national income.
6. VA statement is built on the basic conceptual foundations which are currently accepted in balance sheets and income statements. Concepts such as going concern, matching, consistency and substance over form are equally applicable to VA statement.

Q28. (a) Explain the concept of 'Economic value added' (EVA for short) and its uses.

(b) What is economic value added and how is it calculated? Discuss.

Answer 28.

(a) Economic Value Added (EVA) for short, is primarily a benchmark to measure earnings efficiency. Though the term "Economic Profit" was very much there since the inception of "Economics", Stern Stewart & Co., of USA has got a registered Trade Mark for this by the name "EVA", an acronym for Economic Value Added.

EVA as a residual income measure of financial performance, is simply the operating profit after tax less a charge for the capital, equity as well as debt, used in the business. EVA includes both profit and loss as well as balance sheet efficiency as well as the ROCE, or ROE.

In addition, EVA is a management tool to focus managers on the impact of their decisions in increasing shareholders' wealth. These include both strategic decisions such as what investments to make, which businesses to exit, what financing structure is optimal; as well as operational decisions involving trade-offs between profit and asset efficiency such as whether to make in house or outsource, repair or replace a piece of equipment, whether to make short or long production runs etc.

Most importantly the real key to increasing shareholder wealth is to integrate the EVA framework in four key areas; to measure business performance; to guide managerial decision making; to align managerial incentives with shareholders' interests; and to improve the financial and business literacy throughout the organisation.

To better align managers interests with Shareholders – the EVA framework needs to be holistically applied in an integrated approach – simply measuring EVAs is not enough it must also become the basis of key management decisions as well as be linked to senior management's variable compensation.

(b) Economic Value Added (EVA) is primarily a benchmark to measure earnings efficiency. EVA as a residual income measure of financial performance is simply the operating profit after tax less a charge for the capital employed, equity as well as debt, used in the business.

Mathematically EVA= OPBT - Tax - (TCE × COC)

Where :

OPBT = Opening Profit Before Tax

TCE = Total Capital Employed

COC = Cost of Control

Because EVA includes both profit and loss as well as balance sheet efficiency as well as the opportunity cost of investor capital - it is better linked to changes in shareholders wealth and is superior to traditional financial measures such as PAT or percentage of return measures such as ROCE or ROE.

EVA, additionally, is a tool for management to focus on the impact of their decisions in increasing shareholders wealth. These include both strategic decisions such as what investments to make, which business to exit, what financing structure is optimal; as well as operational decisions involving trade-offs between profit and asset efficiency such as whether to make inhouse or outsource, repair or replace an equipment, whether to make short or long production runs etc.

Most importantly the real key to increasing shareholders wealth is to integrate EVA framework in four key areas, viz., to measure business performance, to guide managerial decision making, to align managerial incentives with the shareholders' interests and to improve the financial and business literacy throughout the organisation.

To better align managers interests with shareholders' - the EVA framework needs to be holistically applied in an integrated approach - simply measuring EVA is not enough; it must also become the basis of key management decisions as well as be linked to senior management's variable compensation.

However, EVA as a strategic tool has the following limitations:

1. Not easy to use; too complicated for small businesses.
2. Recommends inexpensive debts in order to reduce the cost of capital.
3. A passive tool, measures past performance.

Q29. The following information is available of a concern; calculate E.V.A:

Debt capital 12%	Rs. 2,000 crores
Equity capital	Rs. 500 crores
Reserve and surplus	Rs. 7,500 crores
Capital employed	Rs. 10,000 crores
Risk-free rate	9%
Beta factor	1.05
Market rate of return	19%
Equity (market) risk premium	10%
Operating profit after tax	Rs.2,100 crores
Tax rate	30%

Answer 29.

E.V.A. = NOPAT – COCE

NOPAT = Net Operating Profit after Tax

COCE = Cost of Capital Employed

COCE = Weighted Average Cost Of Capital ´ Average Capital Employed

= WACC ´ Capital Employed

Debt Capital		Rs.2,000 crores
Equity capital 500 + 7,500	=	Rs.8,000 crores
Capital employed	=	2,000+8,000 = Rs.10,000 crores
Debt to capital employed	=	$\frac{2,000}{10,000} = 0.20$

Equity to Capital employed $= \frac{8,000}{10,000} = 0.80$

Debt cost before Tax	12%	
Less:	Tax (30% of 12%)	3.6%
Debt cost after Tax	8.4%	

According to Capital Asset Pricing Model (CAPM)

Cost of Equity Capital = Risk Free Rate + Beta ´ Equity Risk Premium

Or

= Risk Free Rate + Beta (Market Rate – Risk Free Rate)

= 9 + 1.05 × (19-9)

= 9 + 1.05 × 10 = 19.5%

WACC = Equity to CE x Cost of Equity capital + Debt to CE x Cost of debt

= 0.8×19.5% + 0.20× 8.40%

= 15.60% + 1.68% = 17.28%

COCE = WACC × Capital employed

= 17.28% × 10,000 crores = 1728 crores

E.V.A. = NOPAT – COCE

= Rs. 2,100 – Rs. 1,728 = Rs. 372 crores

Q30. (**a) "The content of corporate social report is essentially based on social objectives." Discuss.**

(b) Enumerate the major heads identified for corporate social reporting purposes.

(c) rite short note on Corporate Social Reporting.

Answer 30.

(a) The content of Corporate Social Report is essentially based on the social objectives. Brummet identified five areas wherein social objectives can be traced out, namely, Net Income Contribution, Human Resource Contribution, Public Contribution, Environmental Contribution and Product or Service Contribution.

In view of the social objectives, the importance of earning objective is not understated, rather attainment of social objectives is dependent on earning objective. A sick business entity becomes liability to the society and sustains social costs instead of generating social benefits.

Human Resource Contribution is the indicator of the impact of organisational activities (viz. pay and allowances, perks and incentives, recruitment, training and development, placement, promotion and transfer, welfare measure, etc.) on people of the organisation. Public Contribution is the indicator of general philanthropy in the cultural and social welfare programmes and contribution to national exchequer by way of tax and duties.

Industrial activity is supposed to consume irreplaceable resources and produces solid wastes. By this process it pollutes air and water, causes noise and spoils the environment. These are termed as negative social effects. The corporate social objective is the abatement of such negative effect. It is covered by environmental contribution.

Lastly, the Product or Service Contribution covers the qualitative aspects of the organisation's product or service. It includes quality guarantee, redressal of customers' grievances, honest exposure in advertisement etc.

Although Brummet covered wide range of objectives, still these are not essentially exhaustive. Social objectives are determined by socio-economic conditions of a country. It is difficult to set universal list of social objectives to be pursued by the corporate sector. For example, in India, regional imbalance, unemployment, reservation for weaker sections of the population, scarcity of foreign exchange, energy deficit, population pressure and illiteracy are some of the widely accepted socio-economic problems. And obviously the general expectation is that the corporate sector will positively contribute to such socio-economic problems. Since the socio-economic problems of a country change over time or the priority attached to a problem shifts. Brummet's over simplified set of contributions should be suitably moulded to fit in the perspective of socio-economic problems of a country.

(b) Considering the major socio-economic problems of the country, eight major heads may be identified for Social Reporting purposes:

I. Employment Opportunities.
II. Foreign Exchange Transactions
III. Energy Conservation.
IV. Research and Development.
V. Contribution to Government Exchequer.
VI. Social Projects
VII. Environmental Control.
VIII. Consumerism.

I. Creation of employment opportunities during the year may be classified into opportunities in India and opportunities abroad. In India employment may be created either by expansion/ diversification in backward or other areas. However, employment protection by absorption of sick units may also be treated as employment opportunities. Moreover, the corporate enterprise may create new openings abroad by adopting foreign projects. In all such cases, quantitative information needs to be disclosed giving break-up of SC/ST persons, physically handicapped persons, women and other workers appointed during the year. Tax advantage or subsidy received for establishing industrial units in backward areas or absorption of sick units should be disclosed properly. If the corporate enterprise follows human resource accounting system, it may show human assets created during the year and costs incurred for such purpose.

II. In view of the scanty foreign exchange reserve, it is desirable to disclose foreign exchange transactions in details. Foreign exchange inflows occur by exports or earnings from foreign projects. Also saving in foreign exchange is equivalent to foreign exchange inflows. An enterprise can save foreign exchange by import substitution and replacement of foreign technology/ technician. Foreign exchange outflows are caused by purchase of' raw materials/spares, plant and machinery capital repayment, payment of dividend and interest. It is desirable to report inflows and outflows for each currency separately and a summary statement in Indian currency. Any tax advantage/export subsidy received for foreign exchange earnings should be disclosed as an item of social cost.

III. Energy purchased/generated and energy consumed per unit of standard product are to be reported along with consumption norm of the industry. Energy Audit Reports prepared by BICP may be followed for industry norms wherever applicable. Positive/negative variation in energy consumption should be reported along with reasons therefor.

IV. Recurring/non-recurring cost incurred for research and development is to be reported along with results. If possible, effect of research and development activities may be quantified in terms of cost saved/profit added. Any tax advantage/subsidy received is to be reported as social cost incurred along with the generation of social benefits from research and development.

V. Contribution to Government exchequer by way of sales tax, income tax, excise, custom and other duties needs to be reported as an item of social benefits.

VI. Contribution to social projects may be further classified into direct involvement of corporate enterprise and donations to different organisations. Social projects like construction of road, establishment of school, college, research institute, hospital, stadium, etc. may be earmarked alongwith the categories of beneficiaries and cost involved.

In case of donation to any organisation, the nature of the organisation may be stated along with the tax advantage received by way of such donations.

(Contribution of the corporate enterprise for development of sports and games, cultural matters and self-employment programmes may be reported as creation of social benefit).

VII. Negative social effect caused by the corporate enterprise may be quantified stating use of irreplaceable resources and nature of pollution caused. Action taken and cost involved for pollution control should be reported as an item of social benefit.

VIII. Failures in terms of complaints received against improper quality, poor service etc. may be reported under social costs. Action taken and cost involved for undertaking quality control and customers' service should be reported under social benefits.

(c) Corporate Social Reporting is the information communique with respect to discharge of social responsibilities of corporate entity. The transition in accounting function from historical cost based profitability accounting to social responsibility accounting is a good fit to the present-day data requirement of the "Users of accounts".

The content of Corporate Social Report is essentially based on the social objectives, namely Net Income Contribution, Human Resource Contribution, Public Contribution, Environmental Contribution and Product or Service Contribution.

Considering the major socio-economic problems of the country, eight major heads can be identified for social reporting purpose:

(i) Employment Opportunities;
(ii) Foreign Exchange Transactions;
(iii) Energy Conservation;
(iv) Research and Development;
(v) Contribution to Government Exchequer;
(vi) Social Projects;
(vii) Environmental Control;
(viii) Consumerism.

Initially, it is difficult to express social costs incurred by a corporate enterprise and social benefits generated in money terms. Until suitable methodologies are available for conversion of social cost-benefit in money terms, it is desirable to begin with descriptive social report. Further research is necessary in this area either to improve heads of corporate social reporting in the context of dynamic socio-economic environment.

Q31. Write short notes on :

(a) Jaggi and Lau model on valuation on group basis of Human Resources.

(b) Opportunity cost (HRA).

(c) Human Resource Accounting.

Answer 31.

(a) According to Jaggi and Lau Model, proper valuation of human resources is not possible unless the contributions of individuals as a group are taken into consideration. A group refers to homogeneous employees whether working in the same department or division of the organisation or not. An individual's expected service tenure in the organisation is difficult to predict but on a group basis it is relatively easy to estimate the percentage of people in a group likely to leave the organisation in future. This model attempted to calculate the present value of all existing employees in each rank. Such present value is measured with the help of the following steps:

(i) Ascertain the number of employees in each rank.

(ii) Estimate the probability that an employee will be in his rank within the organisation or terminated/promoted in the next period. This probability will be estimated for a specified time period.

(iii) Ascertain the economic value of an employee in a specified rank during each time period.

(iv) The present value of existing employees in each rank is obtained by multiplying the above three factors and applying an appropriate discount rate.

Jaggi and Lau simplified the process of measuring the value of human resources by considering a group of employees as valuation base. But in the process, they ignored the exceptional qualities of certain skilled employees. The performance of a group may be seriously affected in the event of exit of a single individual.

(b) **Opportunity Cost:** It is one of the Economic value models used for measurement and valuation of Human assets. As per this model, opportunity cost is the value of an employee in his alternative use. This opportunity cost is used as a basis for estimating the value of Human resources. Opportunity cost value may be established by competitive bidding within the firm so that in effect, Managers must bid for any scarce employee. A Human asset will have a value only if it is a scarce resource, that is, when its employment in one division denies it to another division. This method excludes employees of the type of which can be readily hired from outside the firm. Also, it is in very rare cases that managers would like to bid for an employee.

(c) Human Resource Accounting (HRA) is an attempt to identify, quantify and report investments made in human resources of an organization. Leading public sector units like OIL, BHEL, NTPC and SAIL etc. have started reporting human resources in their annual reports as additional information. Although human beings are considered as the prime mover for achieving productivity, and are placed above technology, equipment and money, the conventional accounting practice does not assign significance to the human resource. Human resources are not thus recognized as 'assets' in the Balance Sheet. While investments in human resources are not considered as assets and not amortised over the economic service life, the result is that the income and expenditure statement comprising current revenue and expenditure gives a distorted picture of the real affairs of the organization.

Accountants have been severely criticized by the Behavioural Scientists for their failure to value human resources, as this has come out as a handicap for effective management.

Human resource accounting provides scope for planning and decision making in relation to proper manpower planning. Also, such accounting can bring out the effect of various new rules, procedures and incentives relating to work force, and in turn, can act as an eye opener for modifications of existing statutes and laws.

Q32. Prepare a segmental report for publication in Glorified Ltd. from the following details of the company's three divisions and the head office:

	Rs. ('000)
Forging Shop Division	
Sales to Bright Bar Division	4,575
Other Domestic Sales	90
Export Sales	6,135
	10,800
Bright Bar Division	
Sales to Fitting Division	45
Export Sales to Rwanda	300
	345
Fitting Division	
Export Sales to Maldives	270

Particulars	**Head Office Rs. ('000)**	**Forging Shop Division Rs. ('000)**	**Bright Bar Division Rs. ('000)**	**Fitting Division Rs. ('000)**
Pre-tax operating result		240	30	(12)
Head office cost reallocated		72	36	36
Interest costs		6	8	2
Fixed assets	75	300	60	180
Net current assets	72	180	60	135
Long-term liabilities	57	30	15	180

Answer 32.

Glorified Ltd.

Segmental Report

(Rs.'000)

Particulars	**Divisions Forging shop**	**Bright Bar**	**Fitting**	**Inter Segment Eliminations**	**Consolidated Total**
Segment revenue					
Sales:					
Domestic	90	—	—	—	90
Export	6,135	300	270	—	6,705
External Sales	6,225	300	270	—	6,795
Inter-segment sales	4,575	45	—	4,620	—
Total revenue	10,800	345	270	4,620	6,795
Segment result (given)	240	30	(12)		258
Head office expenses					(144)
Operating profit					114
Interest expense					(16)
Profit before tax					98
Information in relation to assets and liabilities:					
Fixed assets	300	60	180	—	540
Net current assets	180	60	135	—	375
Segment assets	480	120	315	—	915
Unallocated corporate assets (75+72)	—	—	—	—	147
Total assets					1,062
Segment liabilities	30	15	180	—	225
Unallocated corporate liabilities					57
Total liabilities					282

Sales Revenue by Geographical Market

(Rs.'000)

	Home Sales	Export Sales (by forging shop division)	Export to Rwanda	Export to Maldives	Consolidated Total
External sales	90	6,135	300	270	6,795

Q33. (a) What are derivatives and what are its characteristics?

(b) Explain currency options related to foreign exchange.

(c) Write short note on Interest Rate Swaps.

Answer 33.

(a) Derivative is a product whose value is derived from the value of one or more basic variables, called bases (underlying asset, index or reference rate), in a contracted manner. The underlying asset can be equity, forex, commodity or any other asset. For example, farmers may wish to sell their harvest of wheat at a future date to eliminate the risk of a change in prices by that date. Such a transaction is an example of a derivative. The price of the derivative is driven by the spot price of wheat which is the "underlying asset".

Derivative financial instruments can either be on the balance-sheet or off the balance sheet and include options contract, interest rate swaps, interest rate flows, interest rate collars, forward contracts, futures etc. A derivative instrument is therefore a financial instrument or other contract with the following three characteristics:

(i) It has one or more underlying and one or more notional amounts or payments provisions or both. These terms determine the amount of settlement or settlements and in some cases, whether or not settlement is required;

(ii) It requires no initial net investment or an initial net investment that is smaller than what is required for similar responses to changes in market factors.

(iii) Its terms require or permit net settlement; it can readily be settled net by means outside the contract or it provides for delivery of an asset that puts the recipient in a position not substantially different from net settlement.

Accounting for foreign exchange derivatives is guided by AS 11 (Revised 2003). The ICAI has also issued a Guidance Note dealing with the accounting procedures to be adopted while accounting for Equity Index Options and Equity Stock Options.

(b) Currency Options give the client the right, but not the obligation, to buy/sell a specific amount of currency at a specific price on a specific date. Currency options provide a tool for hedging foreign exchange risk arising out of the firm's operations. Currency options enable the business house to remove downside risk without limiting the upride potential. Options can be put option or call option. A put option is a contract that specifies the currency that the holder has the right to sell. A call option is a contract that specifies the currency that the holder has the right to buy.

(c) Interest rate swap can be defined as a financial contract between two parties (called counter parties) to exchange on a particular date in the future, one series of cash flows (fixed interest) for another series of cash flows (variable or floating interest) in the same currency on the same principal (an agreed amount called notional principal) for an agreed period of time. The contract will specify the interest rates, the benchmark rate to be followed, the notional principal amount for the transaction, etc. Interest rates are of two types, fixed interest rates and floating rates which vary according to changes in a standard benchmark interest rate. An investor holding a security which pays a floating interest rate is exposed to interest rate risk. The investor can manage this risk by entering into an interest rate swap.

Q34. On 24th January, 2009 Chinnaswamy of Chennai sold goods to Watson of Washington, U.S.A. for an invoice price of $40,000 when the spot market rate was Rs.44.20 per US $. Payment was to be received after three months on 24th April, 2009. To mitigate the risk of loss from decline in the exchange-rate on the date of receipt of payment, Chinnnaswamy immediately acquired a forward contract to sell on 24th April, 2009 US $ 40,000 @ Rs. 43.70. Chinnaswamy closed his books of account on 31st March, 2009 when the spot rate was Rs. 43.20 per US $. On 24th April, 2009, the date of receipt of money by Chinnaswamy, the spot rate was Rs. 42.70 per US $.

Pass journal entries in the books of Chinnaswamy to record the effect of all the above mentioned effects.

Answer 34.

Journal Entries in the books of Chinnaswamy

2009			**Rs.**	**Rs.**
Jan. 24	Watson	Dr.	17,68,000	
	To Sales Account			17,68,000
	(Credit sales made to Watson of Washington, USA for $40,000 recorded at spot market rate of Rs. 44.20 per US $)			
" "	Forward (Rs) Contract Receivable Account	Dr.	17,48,000	
	Deferred Discount Account	Dr.	20,000	
	To Forward ($) Contract Payable			17,68,000
	(Forward contract acquired to sell on 24th April, 2009 US $40,000 @ Rs.43.70)			
March 31	Exchange Loss Account	Dr.	40,000	
	To Watson			40,000
	(Record of exchange loss @ Re.1 per $ due to market rate becoming Rs.43.20 per US $ rather than Rs.44.20 per US $)			
" "	Forward ($) Contract Payable	Dr.	40,000	
	To Exchange Gain Account			40,000
	(Decrease in liability on forward contract due to fall in exchange rate)			
" "	Discount Account	Dr.	14,667	
	To Deferred Discount Account			14,667
	(Record of proportionate discount expense for 66 days out of 90 days)			

Contd...

April 24	Bank Account Exchange Loss Account To Watson (Receipt of $40,000 from Watson, USA customer @ Rs.42.70 per US $; exchange loss being Rs.20,000)	Dr. Dr.	17,08,000 20,000	 17,28,000

" "	Forward ($) Contract Payable Account
	        To Exchange Gain Account
	        To Bank Account
	(Settlement of forward contract by payment of $40,000)
		Dr.	17,28,000	
				20,000
				17,08,000

" "	Bank Account To Forward (Rs.) Contract Receivable (Receipt of cash in settlement of forward contract receivable)	Dr.	17,48,000	 17,48,000
" "	Discount Account To Deferred Discount Acount (Recording of discount expense for 24 days: $\text{Rs. } 20{,}000 \times \frac{24 \text{ days}}{90 \text{ days}} = \text{Rs. } 5{,}333$	Dr.	5,333	 5,333

Q35. Write a short notes on:

(a) Accounting issues involved in Environmental Accounting.

(b) Environmental Accounting.

Answer 35.

(a) Major accounting issues involved in environmental accounting can be explained as follows:

(i) Distinction between environmental expenditure and normal business expenditure: Many new machines may incorporate state-of-the-art environmental technology and accordingly, a portion of such capital costs and also the running and maintenance expenditure may be treated as environment related expenditure. It is necessary to frame guidelines indicating whether the reporting entity should properly allocate the capital and revenue expenditures between environmental expenditure and normal business expenditure.

(ii) Capitalisation of environmental expenditures vis-a-vis expensing them during the current accounting period: Environmental protection costs relating to prior periods and current period are generally very high and if expensed in one year as and when a reporting entity is recoursed to and/or persuaded to follow environmental accounting, the adverse impact in EPS is a major concern. Accordingly many Western Corporations prefer to capitalise environment costs instead of immediate expensing and adopt an amortisation policy extending upto 10 years. Although this accounting practice has no theoretical support and rather contradicts the well established accounting concept of "prudence", it is considered as a practical solution to off-load burden of accumulated environmental costs without abruptly disturbing the cash flows attributable to the lenders, Government and finally to the shareholders. However, recognition of environmental costs should not necessarily be restricted to the expenses accrued in view of the applicable environmental laws. It should be guided by ethical consideration.

(iii) Recognition of environment related contingent liabilities: Environmental contingent liabilities are a matter of increasing concern throughout the world. Recognising a liability of hazardous waste remediation frequently depends on the ability to estimate remediation costs reasonably.

In fact, identification and measurement of contingent liabilities are highly debatable accounting aspects. The United Nations Conference on Environment and Development (UNCTAD) papers raise the basic question why environmental contingencies should not be merged with other business contingencies. There is an urgent need for tightening the reporting rules on contingencies incorporating specific requirements for disclosure of environmental contingencies along with other contingencies.

(b) The term 'environment' includes everything in all its manifest forms, on the earth, beneath the earth and above the earth. A business enterprise takes support of social and ecological system in order to maximize wealth. Economic activity, social welfare and a diverse environment, all are linked and ultimately depend on each other. The functioning of an enterprise may have some favourable and some adverse effects on the environment. Hence, it is felt that there is a need for maintaining accounts of the effects of activities of business entity on the environment. Environmental accounting can be defined as a system (methodology) for measuring environmental performance and communicating the results of these measurements to users. It helps in presenting the utilization of natural resources by an enterprise, the costs incurred to use them and the income earned therefrom in a transparent manner. Environmental accounting, entirely a new concept, is a faithful attempt to identify the resources exhausted and the costs rendered reciprocally to the enterprise by a business corporation. Thus environmental accounting stands for recording and documenting environmental performance to facilitate effectiveness of environmental management system with reference to compliance, safety and quality control. It provides a data base for taking corrective steps and future action for developing organisation's environmental strategy and for identifying environmentally based opportunities for gaining an edge over one's competitors. If proper environmental accounting system is established, the enterprise will be able to anticipate environmental damage and therefore can prevent it from happening.

Of course environmental accounting is still in an early stage of evolution and it is being groomed under the voluntary leadership of a variety of enterprises around the world. Recognising the importance of protecting and preserving the environment, a number of laws have been enacted throughout the world.

Q36. Explain the concept of fund theory and fund based accounting.

Answer 36.

Fund theory and fund based accounting: Although, the profit motive is the driving force for any business entity, there are certain organisations which are run without profit motive. Such organisations may be governmental institutions or any non-profit institutions like colleges, universities, charitable hospitals etc. The accounting for these not-for profit entities is primarily based on the fund theory. The fund theory is based on the equation - Assets = Restrictions on assets. Assets represent prospective services to the fund and liabilities represent restrictions against the assets of the fund. For example, in case of a university, the most commonly used specific funds are endowment funds, development funds etc. Each of these funds has its specific assets restricted for particular purposes. Under the fund theory, the balance sheet is considered an 'inventory statement' of assets and those restrictions applicable to the assets. Revenues represent an increase in assets into the fund that are completely free of equity restrictions other than the final restriction imposed by the residual equity. The residual equity represents a final restriction on the assets and establishes the equality of assets and equities. Expenses represent the release of services for designated purposes specified in the objective of the fund. Thus, the fund theory calls for fund based accounting rather than entity based accounting.

A fund may be defined as an accounting entity "with a self balancing set of accounts regarding cash and/or other resources together with all related liabilities and residual equities or balances, and changes therein, which are segregated for the purpose of carrying specific activities or attaining certain objectives in accordance with special regulations, restrictions or limitations". Thus, every fund is aimed at fulfilling some purpose and the services embodied in the assets are the primary means to achieve that purpose. Fund based accounting essentially involves preparation of financial statements fundwise and consolidation of those statements to represent the financial results/position of the organisation as a whole.

Q37. What are the special features of accounting for Educational Institutions?

Answer 37.

Special Features of Accounting for Educational Institutions: An educational institution is generally not run for profit. Its, administrators, as custodians of public funds, are accountable of their proper expenditure for educational purpose. The marked difference between commercial accounting and that for educational institutions is that the former places emphasis on proper ascertainment of profits, while the latter is more generally concerned with exercising control over expenditure so as to conform to the stipulated norms and to the academic objectives of the institution to which it relates.

In the case of institutions like colleges and universities, separate ledgers are maintained for each fund. Funds may be broadly classified into two categories - Revenue Funds and Specific Funds. Revenue Funds may be further classified as Unrestricted Fund and Restricted Fund. Specific Funds are Endowment Funds, Annuity and Life Income Funds, Development Funds etc. Separate balance sheet is prepared for each fund and a statement of activity (popularly known, as Income and Expenditure Account) is prepared for only revenue funds- both restricted and unrestricted. Finally, each individual balance sheet is consolidated to get a general balance sheet of the institution as a whole.

Revenue Funds- Restricted and Unrestricted: Revenue funds essentially record normal revenue transactions. However, the use of revenue fund may be restricted or unrestricted. In the case of restricted funds, income is recognised to the extent of expenditure incurred. The accounting basis of the unrestricted fund is the accrual method as used for commercial entities.

There may be transfers out of revenue funds to specific funds and vice-versa. Some transfers are mandatory and some are non-mandatory.

Both mandatory and non-mandatory transfers are reported separately in the financial statements of the revenue funds.

Specific Funds: Specific funds are earmarked for well defined purposes. Contributions and transfers arc directly credited to respective fund balances. Expendable resources are transferred to revenue funds except for capital outlay and debt retirement which are accounted for in development or asset fund and loan fund respectively. For the specific funds no statement of income is prepared.

However a statement is prepared showing the movements in fund balances. The features of certain important specific funds are dis-cussed below.

(a) **Endowment Funds:** Incomes from these funds usually are transferred to another fund where it may be expended. Interest revenue out of such fund is accrued at the end of accounting year. The fund is usually invested in some securities and such invest-ment is valued at cost price. If the income out of such investment is available for unrestricted purposes it is recognised in the unrestricted fund. On the other hand if the income is to be used for some specific purpose it is transferred to that specific fund. The only time, the investment income is recognised in the endowment fund is when the terms of agreement specify that the income must be added to the endow-ment principal.

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(b) **Loan Funds:** Loan funds account for resources that may be loaned to faculty or staff. No revenue or expense accounts are used in the loan fund. All transactions affecting fund balance are recorded directly to fund balance. Interest on loan is credited to the fund balance on accrual basis. Investment income is also accrued. Administra-tion and collection costs relating to granting and recovery of loans are directly charged to this fund. Any bad debt or provision for doubtful loans are also charged to this fund.

(c) **Annuity and Life Income Funds:** These funds account for resources that are given to a not for profit organisation provided that the organisation agrees to make periodic payments to a designated recipient. In the case of annuity funds, the amount of periodic payment is fixed whereas payments vary with the amount of income earned in the case of life income funds.

(d) **Development Funds:** These funds are utilised for developmental purposes like ac-quisition of building and equipments, major repairs to fixed assets etc. Separate fund may be maintained for each developmental activity. Alternatively a combined development fund may be maintained to account for all acquisitions and/or construc-tion of fixed assets. Any expenditure incurred for the purpose of construction or acquisition of building, laboratory etc. are met out of this fund and the asset is recognised in the general balance sheet. Consequently that portion of the fund which has been utilised for the acquisition or construction of the asset should be transferred to unrestricted fund. Depreciation on these fixed assets should be shown as part of operating expenses of unrestricted revenue fund.

To sum up the following statements are to be prepared to get a consolidated picture the organisation as a whole:

(a) Income and Expenditure Account for revenue funds.

(b) Statement showing changes in fund balances.

(c) Balance Sheet of individual funds.

(d) General Balance Sheet.

Q38. A University receives two grants % one from the Ministry of Human Resources to be used for Aids Research. This grant is for Rs. 45,00,000, which includes Rs. 3,00,000 to cover indirect expenses incurred in administering the grant. The second grant of Rs. 35,00,000 received from a reputed Trust is to be used to set up a centre to conduct seminars on Aids related matters from time to time. During the year, it also received Rs. 5,00,000 worth of equipment donated by a well wisher to be used for Aids research. During the year 2007-2002, the University spent Rs. 32,25,000 of the government grant and incurred Rs. 3,00,000 overhead expenses. Rs. 28,00,000 were spent from the grant received from the Trust. Show the necessary Journal Entries.

Answer 38.

Journal Entries

			Dr. **Rs.**	**Cr** **Rs.**
(i)	Bank A/c To Revenue Fund (Restricted) A/c (To record grants received from the Government Department and Private organisation)	Dr.	80,00,000	 80,00,000
(ii)	Expenses A/c To Bank A/c (To account for Rs.32,25,000 spent from out of Government grant and Rs.28,00,000 from out of Private grant)	Dr.	60,25,000	 60,25,000
(iii)	Equipment A/c To Restricted Revenue Fund A/c (To record the receipt of donation of assets from a well wisher)	Dr.	5,00,000	 5,00,000
(iv)	Revenue Fund (Restricted) A/c To Income (Govt. grant) A/c To Income (Private grant) A/c (To recognise revenue)	Dr.	60,25,000	 32,25,000 28,00,000
(v)	Revenue Fund (Restricted) A/c To Bank A/c (To account for overhead expenses incurred)	Dr.	3,00,000	 3,00,000

Note: Actually, the expenses are incurred in unrestricted revenue fund and reimbursed to the above.

Q39. Compare as per IGAAP-USGAAP-IFRS

(a) Balance Sheet

(b) Income Statement

Answer 39.

The comparative analysis of IGAAP-USGAAP-IFRS.

(a) Balance Sheet

Basis of Difference	IFRS	USGAAP	IGAAP
Format	IFRS does not prescribe any format, but stipulates minimum line items like PPE, Investment property, Intangible assets, Financial assets, Biological assets, inventory, receivables, etc.	US GAAP also doesnot prescribe any format , but Rule S-X of SEC stipulates for listed companies minimum line items to be disclosed either on face of Balance sheet or Notes to Accounts.	IGAAP provides two format of Balance Sheet-Horizontaland Vertical format (Part I ofschedule VI to the Companies Act, 1956).
Order	Under IFRS, lineitems are presented in increasing order of liquidity.	Under US GAAP,items in assets and liabilities are presented in decreasing order of liquidity.	In IGAAP, line items are presented in increasing order of liquidity.
Consolidation	Consolidation of Financial statements of subsidiaries is not compulsory until it is required under some other law or regulation.	Under US GAAP con-solidation of results of Subsidiariesand Variable interestentity (FIN 46R) is compulsory.	It is not mandatory for companies to prepare CFS under AS 21. However, listed enterprises are mandatorily required by listing agreement of SEBI to prepare and present CFS.
Current/Non-Current	An organisation hasan option to adopt Current or Noncurrent classi-fication of assets and liabilities	Bifurcation into current & non-current items is cumpulsorily required.	No such requirement

(b) Income Statement

Basis of Difference	IFRS	USGAAP	IGAAP
Format	IFRS does not prescribe any standard format for income statement but prescribes minimum disclosure includes revenue, finance costs, share of posttax results of JV andassociates usingequity method.	There is no prescribed format, SEC guidelines Rule S-X prescribe minimum line items to be shown on the fac of income statement & suggest 2 alternatives a) a single step format where expenses are classified by function and b) a Multiple step format where Cost of sales is deducted from sales	Under Indian GAAP no format is prescribed , but minimum line items have been specified in Part II of schedule VI to Companies Act, 1956 including Aggregate Turnover, Gross Service revenue for Commission paid to Sole selling agent, Brokerage and discount on sales etc.
Prior Period Items	A prior period item/error should be corrected by retro-spective effect by restatement of opening balance of assets, liabilities or equities	Mandates retrospective application of errorand requiresre statement of comparative opening balance with suitable footnote disclosure.	Requires separate dis-closure of prior period inthe current financial statement & no restate-ment of retained earnings arerequired.
Discounting	IFRS provides that where the inflow of cash is significantly deferred without interest, discounting is needed.	US GAAP also permits discounting in certain cases for instance discounting is done incase of loans, debentures, bonds and upfront fees	There is no concept of discounting under IGAAP.
Change in accounting policy	IFRS requires retro-active application for the earliest period practical and adjust-ment of opening retained earning.	Requires prospective application of change in accounting policy and proforma disclosure of effect on income before extraordinary items on the face of income statement as separate section. Only inspecific case retro-spective is applicable	Under IGAAP, effect for change in accounting policy is given with prospective effect, if the same is material.
Bifurcation of Cost	There is no specific provision in this regard	Total cost is required to be shown separately under : a) Cost of Sales b) Selling and Administration c) R & D	There is no specific provision in this regard. There are certain disclosure requirements under varied A Swhich should be complied.

Basis of Difference	IFRS	USGAAP	IGAAP
Extra ordinary Events	Disclosure isprohibited	Nature should be both : a) Infrequent b) Unusual Disclosed separatelyon the face of Income Statement net of Taxes after results from operations	Distinct from the ordinary activities of the enterprise and, therefore, are not expected to recur frequently or regularly. The nature and the amount of each extra ordinary item should be separately disclosed in the statement of P & L in a manner that it simpact on current profit or loss can be perceived.

Q40. Compare as per IFRS-USGAAP-IGAAP

(a) Cash Flow Statement
(b) Dividend on Equity Shares
(c) Investments
(d) Impairment of Assets
(e) Business Combinations
(f) Internally Generated Internal Assets

Answer: 40.

(a) CASH FLOW STATEMENT

Basis of Difference	IFRS	USGAAP	IGAAP
Exemptions	No exemptions	Limited exemptions for certain investment entities	Unlisted enterprises, enterprises with a turnover less than Rs.500 million and those with borrowings less than Rs.100 million
Direct/Indirect Method	Both allowed	Both allowed	Both allowed. Listed companies-Indirect method Insurance companies-Direct Method
Periods to be presented	2 years	3 years	2 years
Interest paid	Operating and financing activity	Operating activity (to be disclosed by way of a note)	Financing. In case of a financial enterprise, operating activities

Basis of Difference	IFRS	USGAAP	IGAAP
Interest received	Operating or investing activity	Operating activity	Investing. In the case of a financial enterprise, operating activity.
Dividends paid	Operating or financing	Financing	Financing
Tax payments	Operating	Operating(to be disclosed by way of a note)	Operating
Dividends received	Operating or investing	Operating	Investing. In the case of a financial enterprise, operating activity.

(b) Dividend on equity shares

IGAAP

Presented as a appropriation of profits. Dividends are accounted in the year when proposed.

US GAAP

Presented as a deduction in the statement of changes in shareholders' equity. Cash Dividends are accounted in the year when declared. Only in case of Stock dividend adjustments is done in accounts.

IFRS

Presented as a deduction in the statement of changes in shareholders' equity

Dividends are accounted in the year when declared

(c) INVESTMENTS

IGAAP: AS 13

Investments are assets held by an enterprise for earning income by way of dividends, interest, and rentals, for capital appreciation, or for other benefits to the investing enterprise. Assets held as stock-in-trade are not 'investments'

(A) Current Investments – Lower of Cost or Fair Value

(B) Long term Investments. – At cost. If Permanent decline then reduce the carrying value to declined FMV.

All changes in carrying value is taken to P&L

Reclassification – Long term to Current – at lower of cost and carrying amount

Reclassification – Current to Long term – at lower of cost and Fair Value

INVESTMENTS : US GAAP

(A) Held to Maturity – *At Cost*. (with discount or premium amortized over the effective yield basis). *Most Restrictive category*. securities can be so classified if there is positive intent and ability to hold (maintain the securities) till maturity.

(B) Available for Sale. – *At FMV*. Unrealized gain / loss due to Fair value are accounted under OCI. In case of Permanent decline, the reduction is taken to income statement.

(C) Trading Securities – *AT FMV.* Unrealized gains and losses are entirely taken to Income Statement.

Investment in unlisted securities is valued at cost .There are very stringent limitations on reclassification of Investments.

IF "HTM" securities are sold, use of this category is prohibited. *Provision for diminution (in value of the long-term investment) created in earlier years cannot be reversed, whereas in Indian GAAP it can be reversed.*

INVESTMENTS : IFRS

(A) Held to Maturity – *At Cost*. (with discount or premium amortized over the effective yield basis). *Most Restrictive category*. securities can be so classified if there is positive intent and ability to hold (maintain the securities) till maturity.

(B) Available for Sale. – *At FMV*. Unrealized gain / loss due to Fair value are accounted under OCI. In case of Permanent decline, the reduction is taken to income statement.

(C) Trading Securities – *AT FMV.* Unrealized gains and losses are entirely taken to Income Statement.

Investment in unlisted securities can be valued at FMV.

There are very stringent limitations on reclassification of Investments.

IF "HTM" securities are sold, use of this category is prohibited for next two years

(d) IMPAIRMENT OF ASSETS

Difference Criterion	IFRS and IGAAP	US GAAP
Timing of impairment review	Annually	Whenever events or changes in circumstances indicate that the carrying amount may not be recovered
Asset is impaired if	Recoverable amount < Carrying amount	Fair value < Carrying amount
Recoverable amount/ Fair Value	Recoverable amount ishigher of· • Net Selling Price • Value in use	Fair Value is the amount atwhich an asset or liability could be bought or settled in a current transaction between willing parties
Cash flows for calculating value in use/ fair value	Use discounted cash flows for calculating the value in use	Use discounted cash flows for calculating the fair value
Reversal of impairment loss	Whenever there is a change in the economic conditions	Prohibited

(e) BUSINESS COMBINATION

Indian GAAP:

If the combination satisfies the specified conditions, it is an amalgamation in the form of a merger (Pooling of Interest Method), else an amalgamation in the nature or purchase.

Pooling of Interest Method and Purchase Method allowed

US GAAP:

Acquisition of net assets that constitute a business or controlling equity interests of entities.

Prohibits Pooling of Interest.

IFRS:

Bringing together of separate entities or operations into one reporting entity.

Prohibits Pooling of Interest.

Issues	IFRS	USGAAP	IGAAP
Date of acquisition	When control is transferred	When assets received or equity issued	Date specified by the court or the purchase agreement
Valuation of assets and liabilities	Fair value	Fair value	In pooling of interests method-book valueIn purchase method-book value or fair value
Treatment of goodwill	Capitalize and test for impairment	Capitalize and test for impairment	Estimate the useful life and amortize accordingly
Negative goodwill	Recognized in the income statement	Reduce fair value of non-monetary assets	Disclose as capital reserve
Reverse acquisition	Acquisition accounting is based on substance. Accordingly legal acquirer is treated as acquiree and legal acquiree is treated as acquirer	Similar to IFRS	Acquisition accounting is based on form.Legal Acquirer is treated as acquirer and legal acquiree is treated as acquiree for legal as well as accounting purpose.

(f) INTERNALLY GENERATED INTANGIBLE ASSETS

Issues	IFRS	USGAAP	IGAAP
Research Cost	Charge off	Charge off	Charge off
Development Cost	Capitalize if criterion is met	Charge off	Capitalize if criterion is met

FINAL EXAMINATION

(REVISED SYLLABUS - 2008)

GROUP - IV

Paper-17 : COST AUDIT & OPERATIONAL AUDIT

Section I : Cost Audit

Q. 1. (A) Choose the most correct answer among four alternative statements.

(i) The legal provisions relating to statutory cost audit are applicable to —
- (a) Co-operative Societies.
- (b) Partnerships.
- (c) LLPs.
- (d) None of the above.

(ii) New Cost Audit Orders dated 16^{th} December 2010 have been issued for —
- (a) Amoli Organics (P) Ltd.
- (b) Haldia Petrochemicals Ltd.
- (c) Both of the above.
- (d) None of the above.

(iii) A Cost Auditor should 'qualify ' the Cost Audit Report where —
- (a) He is unable to form an opinion due to non availability of appropriate records/data.
- (b) He finds that items in the cost statements are misstated.
- (c) None of the above.
- (d) Both of the above.

(iii) Para 13 of the Annexure to the Cost Audit Report Rules deals with —
- (a) Research and Development Expenses
- (b) Royalty and Technical Knowhow Expenses
- (c) Quality Control Expenses
- (d) Depreciation.

(v) Under Para 21 of the Annexure to the Cost Audit Report, information regarding margin per unit of output for the product under reference to be furnished for —
- (a) Previous year only.
- (b) Current year and previous 2 years.
- (c) Current year and previous year.
- (d) Previous three years.

(vi) Each major materials for which details to be furnished as per Annexure to the Cost Audit Report Rules should constitute —

(a) 10% of the raw material cost

(b) 2% of the raw material cost

(c) 5% of the raw material cost

(d) 1% of the raw material cost

(vii) 'Significant influence' means :

(a) Participation in the financial policy decisions and control but not operating policy decisions and control of an enterprise.

(b) Participation in the financial or operating policy decisions of an enterprise and control over those policies.

(c) Participation in the financial or operating policy decisions of an enterprise but not control over those policies.

(d) None of the above.

(viii) The Cost Accounting Records u/s 209(1)(d) are to be made available to the Cost Auditor within :

(a) 135 days from the close of the financial year.

(b) 90 days from the close of the financial year.

(c) 180 days from the close of the financial year.

(d) 60 days from the close of the financial year.

(ix) CAS 11 deals in :

(a) Administrative Overheads.

(b) Factory Overheads.

(c) Selling and Distribution Overheads.

(d) Financial Costs.

(x) According to CAS 2 on Capacity Determination , 'Normal Capacity' is :

(a) Practical capacity minus the loss of productive capacity due to external factors.

(b) Difference between installed capacity and the actual capacity utilization.

(c) Maximum productive capacity of a plant.

(d) Installed capacity minus the inevitable interruptions.

Answer 1. (A)

(i) (d) None of the above.

(ii) (c) Both of the above.

(iii) (b) He finds that items in the cost statements are misstated.

(iv) (a) Research and Development Expenses.

(v) (c) Current year and previous year.

(vi) (b) 2% of the raw material cost.

(vii) (c) Participation in the financial or operating policy decisions of an enterprise but not control over those policies.

(viii) (a) 135 days from the close of the financial year.

(ix) (a) Administrative Overheads.

(x) (a) Practical capacity minus the loss of productive capacity due to external factors.

Q. 1. (B) Fill in the blanks :

(i) The ceiling on number of Cost Audits to be undertaken by a Cost Auditor is laid down in Section _________ of Companies Act, 1956.

(ii) Cost Audit was initially introduced in the year _________ .

(iii) Each Cost Accounting Record Rule is given a _________ number and date of publication in the Gazette.

(iv) According to CAS 8 on Utilities the cost of maintaining stand-by utilities is _________ cost.

(v) Equalized transportation cost means _________ transportation cost incurred during a specified period.

(vi) Cost Accounting Record rules were first made for _________ industry.

(vii) Electric Generator is covered by Cost Accounting Records _________ Rules.

(viii) Non-moving stock is being dealt with in Annexure to the Cost Audit Report Rules vide _________ .

(ix) Value Addition is the difference between _________ and the cost of bought in goods and services.

(x) Efficiency audit ensures _________ return on Capital Employed.

Answer 1. (B).

(i) 224(1-B)

(ii) 1965

(iii) GSR

(iv) committed

(v) average

(vi) cement

(vii) Engineering

(viii) Para 18(A)

(ix) value of processed of materials

(x) optimum

Q. 1. (C) State whether following statements are "True" or "False" with reasoning/ justification for your answer.

(i) Cost Audit is synonymous with efficiency audit.

(ii) U/s 233B(1) , an auditor appointed u/s 224 may also audit the cost accounts of the company if he is an AICWA or FICWA.

(iii) Cost Auditor is appointed by General Body at the Annual General Meeting.

(iv) Cost Audit Order is product specific.

(v) Goodwill is to be deducted while computing Net Worth of the Company.

(vi) Donations given to Charitable Institutions should not form part of Cost Accounts.

(vii) Para 17 of the Annexure to the Cost Audit Report on abnormal non-recurring costs provides information for current year and previous year.

(viii) Excess recovery of Excise is income, which is purely financial in nature.

(ix) Cost Accounting Record Rules once applicable to a company require cost accounting record to be maintained year after year on a continuous basis.

(x) Power Transformers are covered by Cost Accounting Records(Electric Cables and Conductors) Rules.

(xi) Capital WIP is required to be shown in the Cost Records.

(xii) Market research cost is not a part of Research and Development Cost.

(xiii) CAS 9 deals with indirect material cost.

(xiv) Under Para 27 of the Annexure to Cost Audit Report the Cost Auditor gives Reconciliation of only 2 years.

(xv) As per CAS 12, fines, penalties, damages and similar levies paid to statutory authorities or third parties shall form part of repair and maintenance cost.

Answer 1.

(i) **True** – The Cost Audit Report mainly comment on the efficiency of the company namely, utilization aspect of the factors of production.

(ii) **False** – Cost Auditor needs to hold Certificate Of Practice from The Institute of Cost and Works Accountants of India.

(iii) **False** – Cost Auditor is appointed by the Board subject to approval of the Central Government.

(iv) The statement is True – A company need not have Cost Audit for the product not specified in the order.

(v) **True** – All intangible assets needs to be deducted, and goodwill is an intangible asset.

(vi) **True** – Expenses on account of donations is purely financial in nature, hence excluded from Cost Accounts.

(vii) **False** – Information is provided for Current Year and Previous two years.

(viii) **True** – Excess recovery of Excise doesnot form part of value addition on manufacturing process.

(ix) **True** – Cost Accountings records should be maintained on continuous bases unless specifically it is withdrawn.

(x) **False** – Power Transformers are covered by Cost Accounting Records(Engineering) Rules.

(xi) **True** – Capital WIP is part of total cost and needs to be shown in cost records.

(xii) **True** – Market Research is part of Selling and Distribution Cost.

(xiii) **False** – CAS 9 deals with packing material cost.

(xiv) **False** – The Cost Auditor gives Reconciliation of only the Current Year.

(xv) **False** – Fines, penalties, damages and similar other livies are purely of financial nature and donot form part of repair and maintainance cost.

Q. 2. (a) Explain the term 'full time employment' in respect to disqualifications of Cost Auditor.

(b) Under what conditions can a firm of Cost Accountants be appointed as Cost Auditors?

Answer 2.

(a) As per Section 224(1)(B) of Companies (Amendment) Act, 1988 no person can be appointed as cost auditor of a company if he in full time employment.

However the Companies Act does not define the term 'full time employment.'

Thus the following guidelines could be helpful :

(i) A whole time director of a company appointed under provisions of Section 269 of Companies Act, 1956 or Secretary under provisions of Section 383 A of Companies Act, 1956 may be considered to be in full time employment.

(ii) Anyone receiving a salary and PF contribution from his employer or getting such other benefits like Bonus, HRA etc. may amount to be in full time employment.

(iii) A person declaring income under the head 'Salaries' under Income Tax Act may be considered to be in full time employment.

(b) The Ministry of Corporate Affairs has decided to approve the appointment of cost auditors in firm's name under sub-Section (2) of Section 233-B of Companies Act, 1956 if such proposal is received from Board of Directors of any company subject to the following conditions:

(i) "All the partners are practicing Cost Accountants within the meaning of Sections 6 and 7 of The Cost and Works Accountants Act, 1959" and;

(ii) 'The firm itself has been constituted with the previous approval of the Central Government / Institute as required under Regulation 113 of the Cost and Works Accountants Act, 1959 as amended from time to time.'

When a firm is appointed as Cost Auditors, authentication of Cost Audit Report is to be done by the signature of any one of the partners of the firm in his own hand for and on behalf of the firm. The report should not be signed by merely affixing firm name.

Q. 3. Explain the following :

(a) Social objectives of Cost Audit.

(b) Supplementary Cost Audit Report.

Answer 3.

(a) The social objectives of Cost Audit are as follows :

(i) Facilitation in fixation of reasonable prices of goods and services produced by the enterprise.

(ii) Improvement in productivity of human, physical and financial resources of the enterprise.

(iii) Channelising of the enterprise resources to most optimum, productive and profitable areas.

(iv) Availability of audited cost data as regards contracts containing escalation clauses.

(v) Facilitation in settlement of bills in the case of cost-plus contracts entered into by the Government.

(vi) Pinpointing areas of inefficiency and mismanagement, if any for the benefit of shareholders, consumers, etc., such that necessary corrective action could be taken in time.

(b) **Supplementary Cost Audit Report :** Where the cost audit report is finalized with provisional figures, a supplementary cost audit report should be submitted by the cost auditor to the Government as soon as audited accounts are available. According to sub-rule (2) of Rule 4 of Cost Audit Report Rules,2001 the Cost Auditor shall also give clarifications required by the Central Government on Cost Audit Report submitted by him, within 30 days of the receipt of communication addressed to him calling for such clarifications.

Q. 4. (a) It is said that 'Cost Audit 'is 'Efficiency Audit'. Explain the statement. What is the evidence from the Cost Audit Report that Cost Audit is 'Efficiency Audit'?

(b) What is the relevance of Cost Audit in India.

Answer 4. (a)

'Efficiency Audit' is systematic appraisal of management methods and is intended to assess the actual performance levels relative to applicable benchmarks or standards. The main purpose of Efficiency Audit is to ensure –

(i) that every rupee invested in capital or in other fields give optimum returns, and

(ii) balancing investment between different functions and aspects designed to give optimum results. Hence, 'Cost Audit' may appropriately be called 'Efficiency Audit'.

The following points may be considered in favour of the argument :

(i) Cost Audit Report Rule, Para 4 deals with capacity utilization giving details of licensed capacity, installed capacity, actual production etc. to counter the problem of underutilization of capacity. Thus cost audit can help in improving efficiency by reducing the idle capacity.

(ii) Information revealed by the Cost Audit Report under Para 7 can be highly useful in energy conservation and help firms to improve their efficiency in utilization of energy resources.

(iii) Para 5(b) requires comparison of per unit actual consumption of major inputs with the standard. Such comparison is a very important control ratio and helps in analyzing the production efficiency by bringing to focus the areas where wastage of raw materials occur.

(iv) Efficiency of industrial units is affected by abnormal / non-recurring costs. An analytical study of information given under Para 17 can provide useful information to management to improve its working.

(v) Para 18 reveals information on slow and non-moving stock. This information will guide management in setting up of a sound inventory system and help in improving the inventory ratio.

(vi) Information given under Para 8 helps to analyse the efficiency of the staff employed.

(vii) Para 22 provides information on 'competitive margin against imports'. This helps Govt. not only to promote exports but also to protect all Indian industry from unlawful dumping by foreign units.

(viii) Similarly other paras like para 24 on financial position, para 21 on margin per unit of output, para 23 on value addition, para 28 on profit reconciliation, Cost Auditor's observations- will go a long way for cost reduction, increasing productivity, efficiency of the firm etc.

On basis of the above points, it can be established that cost audit is well designed to bring to light the efficiency aspect of performance of a company and is thus appropriately called 'Efficiency audit'.

Answer 4. (b)

Relevance of Cost Audit in India :

Liberalization and Globalization – The liberalization of the economy has increased the relevance of Cost Audit in India more than ever before. In the present competitive scenario of globalization; the Cost Audit Reports have assumed greater importance and significance as the only source of reliable and authentic feedback to the government and its various departments and agencies.

It has become very important that the product and services are made more competitive by constantly improving efficiency by reducing vital input costs and reduction of wastage. This constant exercise has to be monitored by Cost Audit only.

For toning up efficiency and productivity – Cost Audit is a powerful tool to highlight areas of inefficiency and improving performance. As such the need for Cost Audit is more in the present scenario than before.

Antidumping – The Cost Record and Cost Audit Report will play a good source document for the Indian exporters to substantiate their fair approach against any allegation of dumping.

Further, for imposing Anti-dumping duties on the import into India, the expertise of Cost Auditors and certification by them will be useful.

Transfer pricing issue – Cost Audit Report Rules, 2001 have been amended to take care of the issue of 'Transfer Pricing' in right perspective in judging its impact on business activites.

Audit Committee – The formation of Audit Committee is a big leap in ensuring good corporate governance. Cost Auditor plays as key role in the Audit Committee meetings.

Major source of information for Direct & Indirect Tax authorities – An independently audited Cost Records and the resultant Cost Audit Report become a major source of information, which can be effectively used by both the Direct & Indirect Tax authorities.

Serves Central Excise authorities – The Cost Audit Report are used by Central Excise Authorities for verifying the claim of the companies relating to ex-factory prices of the exisable goods, especially in the case of Inter-unit transfer.

Fixation of Tariff by the Tariff commission – The Tariff Commission relies on the authenticity of the Cost Audit Reports for fixing the tariff of the products, covered under Cost Accounting Records Rules.

Other relevant roles – Cost Audit serves the interests of shareholders. It is also made use of by Income Tax Authorities. Further, the Banks and Financial Institution also find the report as useful. The Cost Audit Report is used as evidence by DGIR (Directorate General of Investigation and Registration) in pursuit of cases with the MRTP Commission.

Q. 5. (a) ABC Ltd. has received an enquiry for supply of 2,00,000 numbers of Special Type of Machine Parts. Capacity exists for manufacture of the machine parts, but a fixed investment of Rs. 80,000/- and working capital to the extent of 25% of Sales Value will be required to undertake the job.

The costs estimated as follows :

Raw Materials- 20,000Kgs @ Rs. 2.50 per kg.

Labour Hours- 9,000 of which 1,000 would be overtime hours payable at double the labour rate.

Labour Rate- Rs. 2 per hour.

Factory Overhead- Rs. 2 per direct labour hours.

Selling and Distribution Expenses- Rs. 23,000

Material recovered at the end of the operation will be Rs. 6,000 (estimated).

The Company expects a Net Return of 25% on Capital Employed.

You are Management Accountant of the Company. The Managing Director requests you to prepare a Cost and Price Statement indicating the price which should be quoted to the Customer.

(b) SMP Ltd. has its own power generation plant using steam. The data relating to the same for the period 2010-11 are :

Productions	Steam	Electricity
Units	**27,000**	**15,000**
Costs:	**Rs.**	**Rs.**
A. Fuel		
(i) Coal	**3240**	**-**
(ii) Others	**972**	**-**
B. Steam	**-**	**2700**
C. Utilities		
(i) Gas	**3645**	**-**
(ii) Electricity	**648**	**-**
(iii) Others	**405**	**450**
D. Fixed Costs	**1215**	**450**
	10125	**3600**

The State Electricity Board has offered electricity at a concessional rate of Rs. 0.18 per unit between 10 p.m and 6 a.m (third shift) as against the normal rate of Rs. 0.27 per unit for the rest of the period.

Discuss the implications of accepting the offer assuming that utilities costs are partly fixed to the extent of 25%.

If utilities are fully variable, what would be the position?

Answer 5. (a)

Statement of Estimated Cost and Price Quotation.

Product : Special Type Machine Parts. **Quantity** = 200000 units.

	Rs.	Rs.
Materials(20000 Kgs. @ Rs.2.50)	50,000	
Less : Estimated Scrap value	6,000	44,000
Labour-		
8000 hrs. @ Rs. 2	16,000	
1000 (OT) hrs. @ Rs. 4	4,000	20,000
Prime Costs		64,000
Add : Factory overhead (9000 hrs. @ Rs. 2)		18,000
Factory Cost		82,000
Add : Selling and Distribution Expenses		23,000
Total Cost		1,05,000
Add : Profit		28,333
Sales		1,33,333

Selling Price / unit = 133333/200000 = Rs. 0.67

Working Notes :

Calculation of Sales.

Let Sales be S

$$S = \text{Total Cost} + 25\ \%\ \text{of Capital Employed.}$$
$$= 105000 + 25/100*(80000+S/4)$$
$$S = 105000 + 20{,}000 + \frac{S}{16}$$
$$S = 125000 + \frac{S}{16}$$
$$S - \frac{S}{16} = 125000$$
$$\frac{16S - S^{16}}{16} = 125000$$
$$15S = 125000 \times 16$$
$$15S = 2000000$$
$$S = 133333.33$$

Sales = Rs. 133333

Profit = Sales – Cost = 133333 – 105000 = Rs. 28333

Working Capital = 1/4th of Sales = 133333*1/4 = Rs. 33333/-

Answer 5. (b)

Cost per unit of power generated:

= Cost of (Steam+Electricity + others) /15000 units.

= (2700 + 450 + 450) lacs /15000 units

= Re. 0.24

Average cost per unit of power purchased:

= Rate(From 10 p.m to 6 a.m) + Rate (From 6 a.m. to 10 p.m.)/Total Hours.

= [(0.18 * 8 Hrs.) + (0.27 * 16 Hrs.)]/ 24

= (1.44 + 4.32)/24

= Re. 0.24

Hence cost of generated power and average cost of purchased power are equal. Thus purchasing power during the third shift period, i.e. 10 p.m. and 6 a.m is cheaper.

Q. 6. (a) There was a strike from 13.9.2010 to 16.11.2010 in a company, of which you were the Cost Auditor for the year ending 31.3.2010. Although the company began working from 17.11.2010, production could effectively begin only from 5.12.2010. The expenses incurred during the year ended 31.3.2011 were :

	Rs. in lacs
Salaries and Wages (direct)	**300**
Salaries and Wages (indirect)	**200**
Power (variable)	**120**
Depreciation	**180**
Other Fixed Expenses	**240**

Detail examination of the records reveals that of the above, the following relate to the period 13.9.2010 to 16.11.2010 :

	Rs. in lacs
Salaries and Wages (indirect)	**70**
Depreciation	**60**
Other Fixed Expenses	**90**

Calculate the amount which, in your opinion, should be treated as abnormal for exclusion from the product costs.

(b) How are Abnormal loss of recurring nature treated as per costing principles?

Answer 6. (a)

Calculation of Fixed expenses incurred during the period 17.11.2010 to 04.12.2010

	Rs in lacs
Total expenses 2010 - 11	1,040
Less : Variable expenses (Electricity)	120
Fixed expenses (2010 - 11)	920
Less : Fixed expenses during the strike period	220
Fixed expenses during non-strike period	700

Since the. strike period was for 65 days, the non-strike period is 300 days. Hence, Fixed expenses attributed to 18 days, i.e., 17.11.2010 to 4.12.2010 is 6% $\left(\frac{8}{300}\times 100\right)$ of Rs. 700 lakhs = Rs. 42 lakh.

Therefore, Expenses incurred during 13.9.10 to 16.11.10	Rs. 220 lacs
For expenses incurred during 17.11.2010 to 04.12.10	Rs. 42 lacs
Total	Rs. 262 lacs

Hence, Rs. 262 lakh is to be treated as abnormal cost and should be excluded from the product cost.

Answer 6. (b)

If a particular cost is abnormal but it is of recurring in nature, it should be treated as part of cost and not mentioned in para 17 of the Annexure to Cost Audit report. For e.g ‘off-season’ salary and wages paid to employees in sugar industry should not be taken as abnormal as they are recurring every year and treated as a part of cost.

Q. 7. (a) Based on the following information, in respect of a concern manufacturing cement, you are required to offer your comments, as a Cost Auditor on

(i) the performance of the concern,

(ii) your suggestions for improvement:

Given: Rated Capacity 80 MT/Hr.

	Year	**2010**	**2009**
(1)	**Breakdown (Hrs)**	**2164**	**1009**
(2)	**Planned maintenance (Hrs)**	**246**	**420**
(3)	**Power restrictions (Hrs)**	**1230**	**1472**
(4)	**Shortfall (there are no orders) (Hrs)**	**787**	**673**
(5)	**Want of wagons (Hrs)**	**492**	**631**
(6)	**Total stoppage (Hrs)**	**4919**	**4205**
(7)	**Total running (Hrs)**	**3865**	**4555**
(8)	**Total available Hours**	**8784**	**8760**
(9)	**Production during the year (MT)**	**2,47,360**	**3,27,960**
(10)	**Hourly Rate of Production (MT) [(9) ÷ (7)]**	**64**	**72**
(11)	**Capacity Utilization (%)**	**61.84**	**81.99**
	Annual Installed Capacity	**4,00,000 MT**	

(b) A company has following four operations undergone by a product under cost audit. The input, output and labour costs process-wise are given below :

Process	Input M.T.	Output M.T.	Direct Labour cost of the process (Rs.)
A	48000	43200	129600
B	50000	44000	176000
C	72000	66240	331200
D	60000	55500	444000

Calculate "Direct labour cost per unit of the product under reference" as required in para 8(4) of the Cost Audit Report.

Answer 7. (a)

(i) Performance of the concern :

Rated Capacity = 80 MT/Hr .

Rated Capacity achieved in 2009 = (72/80) × 100 = 90%

Rated Capacity achieved in 2010 = (64/80) × 100 = 80%

Thus the capacity achievement as a % of the rated capacity has come down from 90% to 80% in 2010.

(ii) Further the capacity utilization has gone down to 61.84% in2010 as against the figure of 81.99% in 2009 i.e., a reduction by 20.15%

(iii) From the data available, the following observations are noted :

(a) Breakdown hours have gone up from 1009 Hrs. to 2164 Hrs., i.e. by 114.47%

(b) Planned maintenance Hrs. has reduced from 420 Hrs. to 246 Hrs., i.e. by 41.43%

(c) Shortfall Hrs. due to No. of orders has increased from 673 Hrs. to 787 Hrs., i.e. by 16.94%

(d) The total stoppage Hrs. has increased from 4205 Hrs. to 4919 Hrs., i.e. by 16.98%

(e) The total running Hrs. has come down to 4555 Hrs. to 3865 Hrs., i.e. by 15.15%

(f) The production has come down from 3,27,960 MT to 2,47,360 MT., i.e. by 24.58%

From the above findings, it is ascertained that the under utilization of capacity to the extent of of 20% can be attributed mainly to the

(i) increased total stoppage Hrs. of 4919 in 2010 as against that of 4205 Hrs. in 2009.

(ii) the net increase of 714 Hrs. (i.e. 4919 – 4205 Hrs.) is again due the increase of break down Hours by 1155 Hrs. (i.e. 2164 – 1009 Hrs.) in the year 2010 over the year 2009.

Further from the given data, it is noted that :

Year	2010	2009
Breakdown (Hrs.)	2164	1009
Total stoppage (Hrs.)	4919	4205

Percentage of breakdown Hrs.			
as % of total stoppage Hrs.	=	(2164/4919) × 100	(1009/4205) × 100
	=	44%	24%

Thus the performance has deteriorated steeply in the year 2010 as compared to the performance in the year 2009.

Suggestions :

The management is advised to :

(i) Augment its planned maintenance with a view to reducing breakdown hours.

(ii) Install Power Generation sets with a view to compensate the hours lost due to Power restriction.

Answer 7. (b)

The total labour cost per tonne of the product under audit must be an aggregation of process-wise labour costs after taking into account the good units occurring in each process.

Process	Input	Output	Factor
A	48000	43200	48000/43200 = 1.1111
B	50000	44000	50000/44000 = 1.1364
C	72000	66240	72000/66240 = 1.0870
D	60000	55500	60000/55500 = 1.0811

Process wise labour costs per M.T of output are :

A 129600/43200 = Rs. 3
B 176000/44000 = Rs. 4
C 331200/66240 = Rs. 5
D 444000/55500 = Rs. 8

Charging all the above to the finished product from process D,

Process A = Rs. 3

Process B = (Rs. 3 × 1.1364) + Rs. 4 = Rs. 7.4092

Process C = (Rs. 7.4092 × 1.0870) + Rs. 5 = Rs. 13.0538

Process D = (Rs. 13.0538 × 1.0811) + Rs. 8 = Rs. 22.1125

Direct Labour cost per M.T. of Finished Product = Rs. 22.11

Q. 8. A sugar mill has a boiler which uses its own by product, bagasse as fuel. The steam generated is first used for generation of power and the exhaust steam is used in the process of sugar manufacture. The following details are extracted from the financial accounts and cost accounting records of the sugar mill :

Sugar produced		**24,50,000**	**quintals**
Steam generated and consumed		**12,45,000**	**tonnes**
Fuel (Bagasse) consumed for production of stream		**6,23,450**	**tonnes**
Cost of generation of steam including cost of water (other than fuel cost)	**Rs. 5,75,40,000**		
Steam used for generation of power		**5,75,000**	**tonnes**
Power purchased from Electricity Board @ Rs. 5.75 per KWH		**48,50,000**	**KWH**
Power generated from steam turbine		**4,82,15,000**	**KWH**
Variable conversion cost for generation of power (excluding cost of steam)	**Rs. 3,87,14,000**		

Notes : **(1) The sales value of bagasse, if sold in the open market is Rs. 1,750 per tonne.**

(2) The exhaust steam (after generation of power) transferred to sugar manufacturing process is valued at 85% of the cost of production of steam.

Prepare two separate cost sheet for steam and power as per Cost Accounting Record Rules and compute the average cost of power as per Para 7(A) of the Annexure to the Cost Audit Report.

Answer 8.

Cost of Fuel- Bagasse 623,450 tonnes @ Rs. 1750 per tonne	Rs.	109,10,37,500
Conversion Cost including Cost of water	Rs.	5,75,40,000
Total Cost	Rs.	114,85,77,500
Steam generated (Tonnes)		12,45,000
Gross Cost of steam per tonne (1,14,85,77,500 ÷ 12,45,000)	Rs.	922.55
Steam directly used for sugar production =		
(12,45,000 – 5,75,000) tones × 922.55 =	Rs.	61,81,08,500
Value of exhaust steam from steam turbine		
At 85% of cost = 5,75,000 × 922.55 × 85% =	Rs.	45,08,96,313
Total cost of steam used for Sugar Production =	Rs.	106,90,04,813
Average cost of steam per tonne = (1,06,90,04,813 ÷ 12,45,000)	Rs.	858.64

For disclosure in Para 7 Aof the Annexure to the Cost Audit Report :

Steam Consumption per quintal of sugar $= \frac{\text{Rs. } 12{,}45{,}000 \text{ tonnes}}{24{,}50{,}000 \text{ quintal}} = 0.51 \text{ tonnes}$

Steam cost per quintal of sugar $= \frac{\text{Rs. } 106{,}90{,}04{,}813}{24{,}50{,}000} = 436.32$

Cost of Power

Cost of high pressure steam sent to steam turbine = 5,75,000 tonnes × Rs. 922.55	Rs.	53,04,66,250
Conversion cost for generation of Power	Rs.	3,87,14,000
Total	Rs.	56,91,80,250
Less : Credit for exhaust steam transferred to sugar manufacture (I) in Steam Cost	Rs.	45,08,96,313
Net cost of Power generated	Rs.	11,82,83,937
Power generated		4,82,15,000 KWH
Cost of Power generated	Rs.	2.45 per KWH

For disclosures in Para 7A of the Annexure to the Cost Audit Report

Quantity & Cost of Power	**KWH**	**Rs.**	**Rs./KWH**
(a) Own generation	4,82,15,000	11,82,83,937	2.45
(b) Purchased	48,50,000	2,78,87,500	5.75
	5,30,65,000	14,61,71,437	2.755

Power consumed per quintal of sugar

$$= \frac{5{,}30{,}65{,}000 \text{ KWH}}{24{,}50{,}000 \text{ Quintals}} = 21.66 \text{ KWH}$$

Power cost per quintals of sugar

= 21.66 KWH × 2.755 = Rs. 59.67

Note : Similar data (consumption and cost per unit of output of product under audit) is to be furnished for the current year and two previous years.

Q. 9. (a) The following figures are extracted from the statement prepared by the Cost Accountant and the Trial Balance of XYZ Ltd., which is a single product company :

	31.3.11	Year ending 31.03.10 (Rs. in lakhs)	31.03.09
Gross sales inclusive of Excise Duty	2,040	1,985	1,875
Excise Duty	295	280	265
Raw Materials consumed	1,140	1,060	975
Direct Wages	35	32	27
Power and Fuel	30	27	24
Stores and Spares	6	5	4
Depreciation charged to production cost centres	16	15	13
Factory overheads :			
Salaries and Wages	5	4	3
Depreciation	2	2	2
Rates and Taxes	1	1	1
Other overheads	6	5	4
Administrative overheads:			
Salaries and Wages	10	9	8
Rates and Taxes	2	2	2
Other overheads	162	154	148
Selling and distribution overheads:			
Salaries and Wages	7	6	5
Packing and Forwarding	6	6	5
Depreciation	1	1	1
Other overheads	124	118	108
Interest	85	74	68
Bonus and Gratuity	12	10	9
Gross Current Assets	840	724	640
Current Liabilities and Provisions	324	305	246

You are required to compute the following ratios as per requirement of Para 24 of the Cost Audit Report Rules, 2001 :

(i) Operating Profit as percentage of Value Addition.

(ii) Value Addition as percentage of Net Sales.

Note : **The computation should be based on EBDIT as Operating Profit.**

(b) A company manufacture various types of product under review. As a Cost Auditor would you accept the absorption of 'Selling and Distribution' expenses as a percentage on Sales Values.

Answer 9. (a)

		Year ending 31.03.10 (Rs. in lacs)	
Gross sales inclusive of Excise Duty	2,040	1,985	1,875
Excise Duty	295	280	265
Net sales (A)	1,745	1,705	1,610
Cost of Sales excluding depreciation & Interest			
Raw materials consumed	1,140	1,060	975
Direct Wages	35	32	27
Power and Fuel	30	27	24
Stores and Spares	6	5	4
Factory overheads (excluding depreciation)	12	10	8
Administrative overheads (excluding depreciation)	174	165	158
Selling and distribution overheads (excluding depreciation)	137	130	118
Bonus and Gratuity	12	10	9
Total (B)	1,546	1,439	1,323
∴ Operating Profit (A) – (B) =	199	266	287

Value addition is defined in Para 3(b) of the Cost Audit (Report) Rules, 1996 as "the difference between the net output value (Net Sales) and cost of bought out materials and services for the product under reference". Alternatively in Para 23 of Cost Audit Report Rules, 2001, in item no. A value addition has also been defined as mentioned above.

The working will be :

	31.3.11	**Year ending 31.03.10 (Rs. in lacs)**	**31.03.09**
(X) Net sales	1,745	1,705	1,610
Less : (i) Cost of Bought Out Materials & Service (Raw Materials and Stores & Spares)	1,146	1,065	979
(ii) Power & Fuel, other bought out services	30	27	24
(iii) Over heads (excluding Salaries & Wages, Rates & Taxes and depreciation)	298	283	265
(Y)	1,474	1,375	1,268
Value Addition : (X) – (Y) =	271	330	342

	31.3.11	Year ending 31.03.10 (Rs. in lacs)	31.03.09
Hence			
(a) Operating profit as % of Value Added	199/227	266/330	287/342
i.e.,	73.43%	80.6%	83.92%
			= 84%
(b) Value addition as % of Net Sales	271/1745	330/1705	342/1610
i.e.,	15.53%	19.35%	21.24%

Answer 9. (b)

The method of absorption of Selling and Distribution Overheads as a percentage of Sales Value is not correct because :

(a) Some quantities of product have been consumed captively.

(b) Different advertisement and selling techniques resulting in separate expenses incurred for various types of products.

(c) Freight cost is different for different types of products.

(d) A product has different demand in different areas and their selling expenses cannot be pooled as common.

Q. 10. (a) What information is required to be furnished by the Cost Auditor in the "Annexure to the Cost Audit Report", and "Observation and Suggestion", in regard to exports, if any, of the product under audit?

(b) The financial profit and loss account for the year 2010-11 of a company shows a net profit of Rs. 26,28,00. During the course of cost audit, it was noticed that :

(i) The company wa engaged in trading activity by purchasing goods at Rs. 4,00,000 and selling it for Rs. 5,00,000 after incurring and expenditure of Rs. 25,000.

(ii) Some old assets sold of at the end-end fetching a profit of Rs. 80,000

(iii) A major overhaul of machinery was carried out at a cost of Rs. 4,00,000. And the next such overhaul will be done only after four years.

(iv) Interest was received amounting to Rs. 1,50,000 from outside investments.

(v) Work-in-progress valuation for financial accounts does not as a practice take into account factory overhead. Factory overhead was Rs. 1,85,000 in opening WIP and Rs. 3,15,000 in closing WIP.

Work out the profit as per Cost Accounts and briefly explain the adjustment, if any, carried out.

Answer 10. (a)

Cost Auditor should furnish in his Cost Audit Report Rules, 2001, as follows: -

1. In Para 20, separate details should be furnished for exports. There may be three situations which have to be regarded as Export Sales:

   (a) Transactions in which the goods supplied leaye the country and the sales value is realized/ realizable in foreign currency.

   (b) Transactions in which the goods supplied do not leave the country and the sales value is realized/ realizable in Indian rupee. (deemed exports)

   (c) Transactions in which the goods supplied leave the country and the sales value is realized/ realizable in Indian rupee.

2. In Para 21, "Margin per unit of output" in respect of Export of Sales to be provided.

   In this Para separately will be given for Type-wise/Country-wise of Cost of Sales, Sales Realisation and Margin which will tally with Proforma.
3. In Para 22, "Competitive Margin against imports" states in Sl. no. 7(c) Cost of production/units (Export sale) and in Sl. no. 7(d) Cost of sales/unit (Export sale)
4. Cost Auditor in his observations and suggestions also state the Export commitments of the Company vis-a-vis actual exports for the year under review. Also comment on comparative profitability and pricing policy of the company for domestic and export sales. The auditor also suppose to give impact of exports benefits/incentives offered by the Government on export profitability.

Answer 10. (b)

Reconciliation Statement

	Rs.	Rs.
Profit as per Financial Profit & Loss Account		26,28,000
Add : 1. Proportionate Charge i.e., three-fourth for overhaul of machinery not provided in cost accounts	3,00,000	
2. Difference in the valuation of work-in-progress	1,30,000	4,30,000
Less : 1. Trading profit not included in cost accounts	75,000	
2. Profit on sale of old assets	80,000	
3. Interest received on outside investment	1,50,000	3,05,000
Profit as per Cost Accounts		27,53,000

Q. 11. (a) States the 'Records' that are considered as part of the Cost Accounting under Sec. 209(1)(d).

(b) What review should be made by a Cost Auditor of Cost Accounting Records?

Answer 11. (a)

The following records are considered as part of the Cost Accounting records :

(1) Production
- (a) Consumption resister of raw materials, packing materials, etc.
- (b) Production Report
- (c) Scrap, Wastages, Spoilage and defective report and material reconciliation etc.
- (d) Machine Utilization Report and Idle Time Report.
- (e) Details of Production Hours, Labour Hours and Machine Hours
- (f) Other related matters of production, if any.

(2) Raw Materials, Stores etc.
- (a) Goods received resisters
- (b) Bin Cards and Stores Ledger
- (c) Material Consumption and Stock Reports

(3) Utilities (Steam, Power and water etc.)
- (a) Records of Inputs and Outputs
- (b) Records of cost centre wise allocation of products
- (c) Records for own generated power and purchased power

(4) Wages and Salaries including benefits
   (a) Attendance resisters
   (b) Payroll
   (c) Leave Wages and gratuity payments, VRS payment etc
   (d) Overtime and Idle Time records

(5) Overheads
   (a) Overheads analysis/distribution resisters
   (b) Overhead absorption details

(6) Repairs and maintenance
   (a) Work order resister

(7) Work-in-progress and Finished Goods
   (a) Cost Centre wise/ product wise stock resister
   (b) Product wise Finished Goods resister

(8) Cost Accounts records and statements
   (a) Cost centre wise assets register
   (b) Product Ledger
   (c) Annexure and proforma as per Cost Accounting Record Rules
   (d) Reconciliation of profit/loss as per financial records

(9) Sales
   (a) Sales register including export sales resister
   (b) Sales analysis of by-products (quality, size etc.)

Answer 11. (b)

The Cost Auditor during the course of audit will thoroughly review the cost accounting records as follows:

(1) Method of costing in use - Batch, Job; Process etc.
(2) System of fixation of cost centres.
(3) Procedures for accounting of materials and spares etc.
(4) Methods of accounting of wastages, rejections and defectives.
(5) System of recording of wages, salaries and overtime and their allocation.
(6) Incentive schemes in vogue.
(7) Basis of allocation/apportionment of utilities.
(8) Method of accounting of depreciation and charging depreciation to cost centres.
(9) Method of apportionment of Service Department Expenses to Production Department.
(10) Basis of absorption of overheads to products.
(11) Basis of absorption of interest, bonus, gratuity and selling and distribution overheads.
(12) Budgetary control system.
(13) Internal audit system.
(14) Method of accounting of production and sales.
(15) Treatment of research and development expenses.
(16) Checking of Type/size/product wise cost sheet with PROFORMA for statement showing the cost.of production, cost of sales, sales realization and margin in respect of products under reference produced during the year/period.

Q. 12. (a) How are Cost Accounting Record Rules different from Cost Accounting Standards?

(b) A company under Cost Audit maintains its records on standard costing system. Is this acceptable for Cost Audit? What are the requirements in regard to variances and their treatment in cost proformae?

Answer 12. (a)

Cost Accounting Record Rules	Cost Accounting Standards
Cost Accounting Record Rules are prescribed by the Central Government w.r.t utilization of material, labour or other items other items of cost in respect of a class of companies notified under the provisions of Companies Act, 1956.	Cost Accounting Standards (CAS) are a set of standards designed to achieve uniformity and consistency in cost accounting practices. These are prescribed by Cost Accounting Standard Board(CASB) set up by The ICWAI.
Separate Rules are prescribed for each class of industry or product. Presently 44 products have been under the respective Cost Accounting Record Rules. So coverage of these rules is limited to selected companies only falling in 44 industries.	CAS on other hand are uniformly applicable to all the units including companies and easier to understand and flexible. The coverage is therefore wider.At present there are 12 Cost Accounting Standards.
Most of the Companies today are multi product organizations where only one or two products are covered by the Record Rules. Products under these Rules will be covered by different set of Rules, making it difficult for the Companies to comply them.	On other hand CAS will be equally applicable to the companies and all product manufacturers. Therefore many experts are of the opinion that prescription of Cost Accounting through CAS with appropriate compliance audit or disclosure norms may be much more effective and useful than through complicated Cost Accounting Record Rules. Moreover this will bring more numbers of companies under the ambit and will help Govt. to achieve its objectives.

Answer 12. (b)

Where a company maintains cost records on any basis other than actual such as standard costing, the records shall indicate the procedure followed by the company in working out the cost of the activities and services under the system. The cost variances shall be shown against separate heads and analyzed into material, labour, and overheads and further into quantity, price, and efficiency variances. The method followed for adjusting cost variances in determining the actual cost of activities or services should be clearly indicated in cost records. The reasons for variances should also be clearly explained in cost records.

The cost auditor should verify that treatment of variances in cost statements is reasonable and consistently applied. Whether variances are intentioned or not will be a point of specific mention by the cost auditor.

Q. 13. How would you treat the following as per CAS 9 related to Packing Material Cost?

(i) Primary and Secondary packing material cost.

(ii) Finance cost directly attributable to packing material.

(iii) Self manufactured packing material

(iv) The forex component of imported packing material

Answer 13.

(i) Cost of primary packing materials shall form part of the cost of production.
Cost of secondary packing materials shall form part of distribution overheads.

(ii) Finance costs directly incurred in connection with the acquisition of Packing.
Material shall not form part of Packing Material Cost.

(iii) Self manufactured packing materials shall be valued including direct material cost, direct employee cost, direct expenses, job charges, factory overheads including share of administrative overheads comprising factory management and administration and share of research and development cost incurred for development and improvement of existing process or product.

(iv) The forex component of imported packing material cost shall be converted at the rate on the date of the transaction. Any subsequent change in the exchange rate till payment or otherwise shall not form part of the packing material cost.

Q. 14. How would you compute cost of utilities as per CAS 8 in following circumstances?

(i) Utilities generated for the purpose of inter unit transfers.

(ii) Utilities generated for the inter company transfers.

(iii) Utilities generated for the sale to outside parties.

Answer 14.

(i) Cost of utilities generated for the purpose of inter unit transfers shall comprise of direct material cost, direct employee cost, direct expenses, factory overheads and the distribution cost incurred for such transfers.

(ii) Cost of Utilities generated for the inter company transfers shall comprise direct material cost, direct employee cost, direct expenses, factory overheads, distribution cost and share of administrative overheads.

(iii) Cost of Utilities generated for the sale to outside parties shall comprise direct material cost, direct employee cost, direct expenses, factory overheads, distribution cost, share of administrative overheads and marketing overheads. The sale value of such utilities will also include the margin.

Q. 15. How would you treat the following as per CAS 12 related to Repair and Maintenance Costs?

(i) Cost of Spares.

(ii) Repairs and maintenance costs resulting from abnormal circumstances.

(iii) Assignment of repairs and maintenance costs not traceable to a cost object.

Answer 15.

(i) Cost of spares which do not enhance the future economic benefits from the existing asset beyond its previously assessed standard of performance shall be included under repairs and maintenance cost.

High value spare, when replaced by a new spare and is reconditioned, which is expected to result in future economic benefits, the same shall be taken into stock. Such a spare shall be valued at an amount that measures its service potential in relation to a new spare which amount shall not exceed the cost of reconditioning the spare. The difference between the total of the cost of the new spare and the reconditioning cost and the value of the reconditioned spare should be treated as repairs and maintenance cost.

Example : The cost of new spare is Rs. 80 lacs and the value of existing spare after reconditioning is estimated at Rs. 20 lacs, the difference of Rs. 60 lacs should be treated as repairs and maintenance costs.

(ii) Any repairs and maintenance cost resulting from some abnormal circumstances, if material and quantifiable, shall not form part of the repairs and maintenance costs.

Example : Major fire, explosions, flood and similar events are abnormal circumstances refereed above.

(iii) Where the repairs and maintenance cost is not directly traceable to cost object, it shall be assigned based on either of the following two principles :

(a) Cause and effect-Cause is the process or operation or activity and effect is the incurrence of cost.

(b) Benefits received-Overheads are to be apportioned to the various cost objects in proportion to the benefits received by them.

Section II : Operational Audit

Q. 16. (a) State whether following statements are True or False. Justify your answer.

(i) Productivity is defined as ratio of production and sales.

(ii) There are no fixed items of evidence to be checked by Management Auditor.

(iii) Three-fourths of the members of the audit committee shall be independent directors.

(iv) Director-in –charge of finance cannot vote at Audit Committee meetings.

(v) Sarbanes –Oxley Act of 2002 is a U.K federal law enacted on July 30, 2002.

(vi) In the structure of WTO, MC (Ministerial Conference) is the highest body.

(vii) Dumping is an 'illegal' practice.

(viii) GATT and its agreement are permanent.

(ix) The first and second schedules of Cost and Works Accountants Act prescribes the acts or omissions constituting misconduct by a member.

(x) Assurance engagements involve three separate parties.

Answer 16. (a)

(i) False — Productivity is defined as ratio of output to input.

(ii) True — A Management Auditor has to rely more on his experience and acumen to identify areas of review.

(iii) False — $2/3^{rd}$ of the members of the audit committee shall be independent directors.

(iv) The statement is True.

(v) False — This is a United States federal law enacted on July 30, 2002.

(vi) The statement is true.

(vii) False — Dumping is an 'unfair' practice.

(viii) False — GATT was ad hoc and provisional.

(ix) The statement is true.

(x) True — The parties are a public accountant in practice, a responsible party and intended users.

Q. 16. (b) Fill in the blanks with appropriate word/words.

(i) Pareto distribution is technique used in ________ control.

ii) ________ ________ is needed to create a corporate culture of transparency.

(iii) The origin of the term 'Due Diligence' owes to ________ .

(iv) Excisable goods must come out of ________ process.

(v) QRB consists of chairperson and ________ other members.

(vi) ________ is a movement protecting interest of the consumers.

(vii) The secretariat of WTO is headed by a ________ .

(viii) Management audit requires ________ approach.

(ix) ICWAI is now a ________ of IFAC.

(x) ISO 9000 certification is an ________ service.

Answer 16. (b)

(i) inventory
(ii) Corporate Governance
(iii) US Securities Act, 1933
(iv) production
(v) four
(vi) Consumerism
(vii) Director- General
(viii) inter-disciplinary
(ix) member
(x) assurance

Q. 16. (c) What do the following abbreviations stand for?

(i) SOX
(ii) IFAC
(iii) CERA
(iv) TRAI
(v) IIISLA
(vi) EIA
(vii) SAPs
(viii) CEGAT
(ix) APC
(x) DTA

Answer 16. (c)

(i) SOX — Sarbanes Oxley Act of 2002.
(ii) IFAC — International Federation of Accountants.
(iii) CERA — Central Revenue Audit.
(iv) TRAI — Telecom Regulatory Authority of India.
(v) IIISLA — Indian Institute of Insurance Surveyors and Loss Adjusters.
(vi) EIA — Environmental Impact Assessments.
(vii) SAPs — Standard Auditing Practices.
(viii) CEGAT — Central Excise and Gold Control Appellate Tribunal.
(ix) APC — Agricultural Pricing Commission.
(x) DTA — Domestic Tariff Area.

Q. 17. (a) Enumerate the circumstances which have brought about the development of "Management Audit".

(b) What are the basis differences between 'Management Audit' and 'Operational Audit'?

Answer 17. (a)

Uses of Management Audit :

(1) Management audit is useful in synthesizing, accounting, economic and other data required by management in constructing basic policy framework.

(2) Management audit assist in establishing, reviewing and improving the planning system.

(3) Management audit makes substantial contribution to system of goal setting in the organization.

(4) Management audit ensures that the management is getting the adequate information for correct decisions.

(5) Management audit ensures that the management properly uses the information that it is getting.

(6) Management audit aids in the design and maintenance of adequate authority structure.

(7) It helps in the improvement of information system to expedite flow of information among responsibility centers.

(8) It substantially contributes for improvement of entire communication system.

(9) It helps management in pinpointing key functions or operations in the profit making process.

(10) It helps management in establishing better criterion for measuring results.

(11) It helps management to avoid wasteful, unnecessary and extravagant use of resources.

The following factors have led to the development of 'Management Audit':

Size, scale & complexity of business Operations :

The very size & scale of business operations have lent complexity to the affairs of the organizations. Eventually a stage comes when further development/expansion is either uneconomic or unmanageable. In order to deal with the problems of complexity, a number of techniques and tools have been developed — out of which Management Audit is one such technique – basically meant to overcome the human limitations of top management.

Need to improve productivity :

The industrial development to-day is characterized by a continuous search for improvement of productivity-cum-efficiency through economic utilization of resources-national, physical, human and capital-because of their constraints and limitations. This has called in for Managemcnt Audit to cope up in a world of diminishing resources.

Granting financial subsidy : Granting financial subsidy by the Govt./Financial lnstitutions to sick enterprise is preceded by identification of problems, as faced hy the company. This calls for the necessity of Management Audit.

Take over Bid's :

When a business firm plans to acquire another business enterprise/the Govt. desires to take over any enterprise, the acquiring organization needs to study and evaluate fundamentally the other firm's financial, technical and managerial aspects—which call for a Management Auditor's study.

Societal Need :

A business unit to-day has to meet the needs of the society in order to survive. Management Audit will be able to guide the company for industrial management of social-well-being.

Equity participation : LIC, IFC, UTI and different financial Institutions may like to conduct Management Audit of thc company before deciding for Equity participation.

Foreign Collaboration. The foreign collaborators, while investing funds in the associated companies, may face the necessity of conducting Management Audit of those units for which collaboration agreement is likely to be finalized. This will ensure that the funds are invested for growth and expansion.

Answer 17. (b)

Management Audit	Operational Audit'
(i) Appraises the efficiency of management at all levels throughout the organization, i.e top, middle and supervisory levels.	(i) Reviews the performance of only middle and supervisory levels. Appraisal of top management is beyond the scope of operational audit.
(ii) Questions goals and objective of management.	(ii) It is limited form of management audit and is concerned only with all the operations of the business.
(iii) It is an audit **of** management.	(iii) It is an audit **for** management.

Q. 18. Discuss the following :

(i) Evidence in Management Audit.

(ii) A Management Audit team should be multidimensional.

(iii) Management frauds.

Answer 18. (a)

In management audit, there are no fixed items of evidence that has to be checked by the management auditor on routine basis. A management auditor has to rely more on his experience to identify the areas of review, particularly the areas of weakness to overcome, strengths to be exploited, and risks to be properly covered.

The auditor's evidence comes through his discussions with concerned persons in the organizations, survey and review of various reports like internal audit reports, inspection reports, physical verification, monthly performance review statements, minutes and notes and above all personal observations.

Evidence may be gathered through sampling techniques and on basis of results drawn, going into details where required. It should be understood that a management auditor does not depend on voucher as an evidence, but shall fall back on various records including vouchers as evidence for his audit if sample demand so. The evidence should be such that an auditor can draw valid conclusions duly verifying the same with people concerned. There are no area of restrictions for obtaining evidence for a management auditor.

Answer 18. (b)

Management Audit is a service function with the object of assisting management in achieving the most efficient administration. Management audit involves multidisciplinary and multidimensional approach and requires systematic and dispassionate review of analysis and appraisal of overall performance. It takes into account the techno-economic study of the Industry. As a management auditor is concerned with all aspects of business and the organization, ranging from manufacture to marketing and finance, the management audit team should be multidisciplinary to make multidimensional approach to audit function.

Answer 18. (c)

Fraud is an intentional misrepresentation of facts. In general, it is seen that top executives like Managing Directors, Directors, General Managers and other such executives occupying the high positions in an organization are found to commit management frauds. These frauds are the deception practiced by these managers so as to show their performance better than what they actually are.

The frauds may be committed in cash or in kind for personal benefit of the managers. Such frauds may take the form of misappropriation of assets and manipulation of records. Because of their fiduciary position, the managers have greater control over preparation of accounting and financial statements and better opportunities to defraud the company and others. Prevention of frauds is the duty of management. But when top management itself is perpetuating frauds, it becomes very difficult for anyone else to detect it. The following measures may be adopted for control and prevention of management frauds :

(i) Introduction of adequate internal control system.

(ii) Conducting system audit to improve systems and procedures.

(iii) Sound personnel policies – reviewed and if necessary, revised periodically.

(iv) Tightening supervision at all levels.

(v) Significant variations from budgets or standards should be checked in detail.

Q. 19. (a) The following figure relate to usage of power for a product.

	2010-11	2009-10	2008-09
Total Power Consumed (Kwh)	**24,02,474**	**24,94,872**	**21,75,677**
Rate/Kwh (Rs.)	**2.29**	**2.12**	**1.90**
Total Production in Million kg	**337.730**	**333.084**	**300.865**

Compute necessary productivity measures and compare the efficiency of power usage during the three years.

(b) What is productivity audit? Describe the steps involved and the measures used in this audit.

Answer 19. (a)

	2010-11	2009-10	2008-09
Power consumed in Kwh	24,02,474	24,94,872	21,75,677
Rate per Kwh (Rs.)	2.29	2.12	1.90
Total Power cost (Rs.)	55,01,665	52,89,129	41,33,786
Production (in million kgs)	337.730	333.084	300.865
	(337730 MT)	(333084 MT)	(300865 MT)
Power cost/MT (Rs.)	16.29	15.88	13.74
Power usage MT (KWH)	7.11	7.49	7.23

Variances over previous year :

Rate (Rs.) (2402474) × (2.29 – 2.12)	4,08,420 (A)	5,48,872 (A)
Volume (Rs.)	73,774 (A)	4,42,678 (A)
Usage (Rs.)	2,69,658 (F)	1,63,793 (A)
	2,12,536 (A)	11,55,343 (A)

Calculation of variances :

Volume variance :

	2010-11	2009-10	2008-09
Total power consumed (Kwh)	24,02,474	24,94,872	21,75,677
Rate per Kwh Rs.	2.29	2.12	1.90
Rate variance	24,02,474 (2.12 – 2.29)	24,94,872 (1.90 – 2.12)	
	= Rs. 4,08,421 (A)	= 5,48,872 (A)	
Production in Mill Kg	337.730	333.084	300.865

Volume variance :

2010-11 & 2009-10 (33084 – 337730) × 15.88 = Rs. 73,778 (A)

2009-10 & 2008-09 (300865 – 333084) × 13.74 = Rs. 4,42,689 (A)

Usage variance :

2010-11 & 2009-10

212536 – 408421 – 73778 = Rs. 269663 (F)

2009-10 & 2008-09

1155343 – 548872 – 442689 = Rs. 163782 (A)

Total variance :

2010-11 & 2009-10 5289129 – 5501665 = Rs. 212536 (A)

2009-10 & 2008-9 4133786 – 5289129 = Rs. 1155343 (A)

Answer 19. (b)

Productivity audit is the process of monitoring and evaluating organizational practices to determine whether functions, programmes, and organization itself are utilizing resources effectively and efficiently so as to accomplish objectives.

It is measured in terms of outputs and inputs in relation to the three major factors of production i.e. material, labour and capital. The measurement used in relationship between outputs and inputs measured in physical and/or financial terms.

Productivity audit concentrates on areas such as :

(i) productivity actions
(ii) resource availability
(iii) performance standards
(iv) benefit allocation
(v) productivity policies
(vi) equipment usage
(vii) accountability reporting
(viii) resource allocation.

The measures of productivity for three factors of production :

Material productivity : (i) Obtaining higher output for same input.
(ii) Obtaining same output with lower input

Labour productivity : (i) Labour hour per unit of product.
(ii) Output per man hour.
(iii) Added value per capita or per rupee of labour cost.

Capital productivity: (i) Physical output per rupee of investment.
(ii) Value of production per rupee of investment.
(iii) Value added per rupee of investment.

The audit is done by

(i) Ratio analysis
- Return on capital employed
- Return on sales

(ii) Capacity utilization of plant, equipments and facilities against available capacity
(iii) Material consumption against bench marks.
(iv) Productivity analysis of man hours in time and cost.

Productivity audit consists of following steps :

(i) Setting of standards for different factors of production.
(ii) Choosing yardsticks for measurement of each of the factors.
(iii) Comparing actual performance with standards and identifying variances.
(iv) Making recommendations for control action.

Q. 20. (a) What do you understand by "Corporate Image" and "Brand Equity"? Are they inter related? What are the possible approaches to evaluate corporate image?

(b) What do you understand by "Corporate Services Audit"? Describe the areas of Corporate Services Audit, the scrutiny thereof and the evaluation criteria used in such audit.

Answer 20. (a)

Corporate Image :

The term "Image" indicates an idea or picture formed in the mind of a person about an individual or an institution. Corporations, like individuals, consciously build up images in the minds of the people with whom they come into contact. In developing a 'Corporate Image', an enterprise has to ensure an overall consistency, as regards the quality of the products, the ethics of its management, employee relations, attitudes towards customers, quality and service to customers etc. The Public have different participations of a corporation :

- Customers measure it by the product quality, prompt and courteous after sales service, regularity in maintaining supplies; etc,
- Shareholders measure it by the consistency in financial performance and prospects of growth.
- Supplier measure it by the company's liquidity and ability to honour commitments.
- Banks and Financial Institutions measure it by the financial health, net worth and history of servicing debts,
- Government looks at it from the point of view of revenue generation and as an honest tax-payer.
- Employees look for steady career growth and smooth Industrial Relations.

Brand Equity :

'Brand Equity' is the notional financial value of a brand build up over a long period, by a consistent and continuous effort to promote and sustain customer loyalty for the Company's branded products. This is achieved both by maintaining consistent quality and regular advertisement in popular media, e.g. Lux — an international brand of Hindustan Lever.

Yes. Both Corporate Image and Brand Equity are interrelated concepts. The factor which contribute to build up a 'Corporate Image' also substantially help in building a 'Brand Equity', although the product itself and the marketing function are primarily responsible.

Nevertheless, any setback in areas other than marketing may also Contribute to, the 'Brand Equity'.

Evaluation of Corporate Image :

Evaluation of Corporate Image is a very Complex process and it involves a critical examination of events and trends concerning business environment — both internal as as external.

The following are the steps to evaluate Corporate Image :

- Prepare a list of desirable attributes.
- Group them functionally and Specify the qualifications.

- Assign Weights to each attribute based on their relative importance.
- Involve experts in the respective fields in rating the qualifications and attributes — based on facts, judgments and interpretations.
- Summarize the rating under the selected groups and present a composite evaluation to the management.

The Summary should throw light on what the company has been able to do for itself and for the public in general, represented by the six group — identified earlier.

Answer 20. (b)

Corporate Services Audit :

The term “corporate services” is a generic term, which implies service oriented obligations of a corporate body to different interested ‘Public’ such as consumers, shareholders, community, fellow-businessmen, government etc. It includes the social responsiveness of a business enterprise.

Corporate Services Audit is the audit of the social behaviour of the company to assess the extent to which the company had met the expectations of the customers, employees, shareholders, suppliers and the community.

The scope of Corporate Services Audit extends to the critical examination of the different aspects of services and the extent to which the corporate body has rendered satisfactory services. It also includes the evaluation of the degrees of responsiveness and awareness on the part of such enterprise. The performance of the management towards customers, employees, shareholders, community, fellow-businessmen and government is studied separately and properly evaluated by management auditor.

The areas of Corporate Services Audit and the scrutiny and evaluation criteria can be categorized as follows:

Consumers : Quality of goods in right quantity, right price, right place and right time.

Employees : Pay, Safety, Welfare and Industrial relations etc.

Shareholders : Safety of investment, satisfactory return and capital appreciation.

Community : Social cost and social benefit, public relation.

Fellow-businessman : Business ethics and fair trade dealings.

State : Compliance with various legislations, fair trade practices, payment of taxes etc.

The concept of Corporate Services Audit is that its appraisal system should consider the level of contribution a business entity makes to society and its environment towards raising the quality of life through better product quality and services rather than profit maximization. The Corporate Services Audit thus attempt to distinguish between the end and means of business and provides a new dimension to the concept of audit approach. In Corporate Services Audit, the auditor checks the company’s response to different social needs.

Q. 21. You are the Management Auditor of a large manufacturing company suffering from working capital crunch. What are the related areas which you would probe into to overcome the company’s problem.

Answer 21.

Adequate working capital is required for liquidity and smooth operations of the company. To ensure an adequate flow of working capital to the manufacturing company, the following action plan may be considered :

(i) **Working Capital Estimation :** The company should start by preparing a statement of the projected working capital requirements. This should be based on the functional budgets in sales, production, expenses, capital expenditure and the Master Budget consisting of projected profit and loss and the Balance Sheet.

(ii) **Cash Flow Statement/Cash Budget :** Month-wise cash budgets showing inflows and outflows of cash head-wise should be prepared to analyse the major inflows and outflows affecting the entity. At this stage any wasteful outflow can be traced and eliminated. Bank reconciliation should be undertaken periodically so that outstandings can be traced and acted upon. This is also necessary to reduce the float time.

(iii) **Inventory/Stock Management :** Raw materials and inventories should be classified properly to determine the level of stock of materials. The method of costing also needs to be looked at minutely. There is a need to establish linkage with the production pattern and work backwards accounting for time factor in receipt of material. This needs to be worked out carefully since at no cost, production schedule should be hampered. The caution also need to be exercised that there is no unused/obsolete inventory. The system of inventory management needs to be looked at so as to check the avoidable wastes/scraps generated during storage and handling. Just in time philosophy will enable the company to reduce processing time, stocks and related costs. The adoption of such a mechanism would bring down the cost to a considerable extent.

(iv) **Credit Management :** The company should lay down a proper policy for evaluating customers, determining the credit period and offering discounts for early payment. An age-wise analysis of debtors should also be prepared so as to avoid credit to defaulters. The sale department need to be geared up so that realisation can be made in time. A careful analysis should be done of various customers according to pattern of sales so as to exercise control on their respective debit balances. The company should through its purchase department endeavour to avail the maximum credit period from its creditors. This would enhance the working capital of the company.

(v) **Funds Flow Analysis :** The company should prepare a funds flow analysis, distinguishing between long-term and short-term sources and applications.

(vi) **Investment Management :** The idle funds of the company, if any, should be invested in short-term securities to augment the income.

(vii) **WIP Analysis :** Minimum WIP should be monitored and for the purpose it is necessary to ensure that no bottlenecks develop at any stage during the production process.

Q. 22. (a) As a management auditor of an engineering company, you are requested to submit a report to the management suggesting suitable control procedures for wastage, scrap, spoilage and obsolescence of materials. Draft a report explaining the areas, which you would like to highlight.

(b) Write short notes on :

(i) Points to be considered for takeover bid

(ii) Disclosure and transparency of Corporate Governance

Answer 22. (a)

The Managing Director, Date : ....

M/s XYZ Co.,

Respected Sir,

Sub : Control procedures for Wastage, Scrap, Spoilage and Obsolescence

With reference to your letter dated .... requesting us to examine and report on the system of control and accounting of scrap, wastage, spoilages etc., in your company we would like to suggest the introduction of the following procedures/controls, with a view to ensure proper control :

Procedures/controls, with a view to ensure proper control :

- For identification of waste, scrap, spoilage and obsolete materials, standards based on their values and utility will have to be fixed.
- Output should be measured at the time of production and means to determine whether the quantity of scrap generated is normal or excessive should be established.
- Basis for reconditioning or reusing, the scrap materials should be fixed.
- The scrap generated should be properly accounted for, to avoid misappropriation. Proper arrangement should be introduced for their storage.
- The scrap should be properly graded, taking into account their utility and realizable value.
- Responsibility for sale of scrap should be fixed and scrap should be sold out at periodical intervals.
- Standard ratios should be developed to control the occurrence of spoilage depending on the conditions either normal or abnormal. Proper recording and reporting of spoilages should be done. Control over the storage and handling of spoilages should be introduced.
- Proper basis should be introduced for reprocessing or for disposal of spoilages.
- Spoilages should be accounted for at the point of their production.
- Method of utilization of spoilages should be standardized.
- On regular basis, reports wr.t : slow moving and nonmoving materials should be obtained and action taken to prevent unnecessary purchasing.
- System should be developed for keeping track of obsolescence items.

We would request you to kindly initiate steps for implementation of the above suggestions. Please feel free to ask for clarifications, if any.

Always we remain at your service.

Yours faithfully,
XXXX
(Management Auditor)

Answer 22. (b)

(i) Points to be covered for takeover bid are as follows :

1. Financial condition of the Enterprise — (a) Present status (b) Liability (c) Cash Flow (d) Budget etc.
2. Legal Environment in which Enterprise operate and Legal Stauts — (a) Legal document (b) Agreement with other parties in various aspects.
3. Technical Aspects — (a) Technology application (b) Level of Automation (c) Layout
4. Commercial — (a) Logistic System Target (b) Ordinary/Special Delivery of Material (c) restriction of the Government
5. Marketing — (a) Marketing Strategies (b) Process & Practice followed (c) Demand of the Product
6. Social — (a) Social impact on surroundings (b) Image/perception of the society
7. Human Resources — (a) Present manpower
8. Operation — Any other operation condition
9. Others — (a) Expectation of various take holdings (b) Acquisition etc.

(ii) Disclosure and transparency of Corporate Governance include the followings :

1. Disclosure should include, but not be limited to, material information on :

   (a) The financial and operating results of the company.

(b) Company objectives

(c) Membership of the broad and key objectives, and their remuneration.

(d) Material foreseeable factors

(e) Material issue regarding employees and other stakeholders.

(f) Governance structures and policies.

2. Information should be prepared, audited and disclosed in accordance with high quality standards of accounting, financial and non-financial disclosure and audit.
3. An annual audit should be conducted by an independent auditor in order to provide an external and objective assurance on the way in which financial statements have been prepared and presented.
4. Channels for disseminating information should provide for fair, timely and Cost efficient access to relevant information by users.

Q. 23. Write short notes on :

(a) Environment Audit.

(b) Energy Audit.

(c) Valuation Audit and Cenvat Audit.

Answer 23. (a)

Environment Audit : Environment Audit is a systematic, documented, periodic and objective review by related entities, of facility operations and practice related to meeting environment requirements.

Environmental pollution is classified as air, water, soil, noise, heat etc. Pollution is also classified as natural pollution which generates from natural processes, and artificial pollution which originates due to activities of man. There are several enactments to control pollution including Factories Act, Water Pollution Act, Air Pollution Act, Hazardous Waste Management Rules etc. Environment Audit has both technical and financial aspects. There is no specific provision in any of the Acts or Rules for statutory environment audit by external auditor.

The objectives of an environment audit are —

(i) Evaluation of efficiency and efficacy of utilization of resources, e.g. men, machines, materials.

(ii) Ensuring the control on waste/ pollutant generation.

(iii) Identification of areas of risk, environmental liabilities, weakness in management system and problems in complying with regulatory requirement.

Answer 23. (b)

Energy Audit : Energy Audit means monitoring the energy efficiency of different equipment and process in a plant and looking into way by which the total sum of energy consumed can be cut down without affecting production.

Energy utilization and conservation play an important role in an industry in the present circumstances of rapid diminishing fossil fuels, explosive price rise in the area and a possible switch over to alternative source of energy both for conserving energy costs and attempt alternative source of energy.

Answer 23. (c)

Valuation Audit and CENVAT Audit : Valuation is one of the most vital and important aspect of assessment of excise duty payable. In order to ensure that duty is being paid on correct 'Assessable Value', a provision has been made to order a 'Special Audit' in some specific cases, vide section 14A of CEA. The audit can be ordered with prior approval of Chief Commissioner of Central Excise.

U/S 14AA of CEA, special audit of CENVAT credit availed or utilized can be ordered by Commissioner of Central Excise. Such Audit can be ordered if the Commissioner of Central Excise has reason to belief that

(i) CENVAT credit availed or utilized is not within the normal limits, having regard to nature of final products and type of inputs.

(ii) CENVAT credit has been availed or utilized by reason of fraud, collusion or any willful mis-statement or suppression of facts. Such audit can be done by practicing Cost Accountant to be appointed by the Commissioner of Central Excise. Remuneration and expenses shall be paid by Central Government (Excise Department).

Q. 24. (a) Give an "Audit Programme" as an Internal Auditor of Wage Audit.

(b) What is the role of the Audit Committee as per SEBI guideline and as stipulated in Section 292A of the Companies Act?

Answer 24. (a)

Audit Programme as an International Auditor of Wage Audit :

(1) (i) Name of the Auditee
(ii) Address/Location
(iii) Period to be covered
(iv) Estimated time (days) required
(v) Audit Team members consists of Partner/Qualified/Semi qualified etc.
(vi) Quarries of the Auditor to be settled by the representative of the concern
(vii) Report to be submitted to the representative of the company

(2) Study of various records :
(i) Wages related policy manuals
(ii) Grade Structure
(iii) Incentive Rules
(iv) Overtime Rule
(v) Bonus Scheme
(vi) Various Statutory deduction schemes as for example ESI, PF, EPF etc.

(3) Verification of :
(i) Payroll package is properly updated with employee's details and it is properly functioning.
(ii) Take out the list of employees for the purpose of verification that no entry is Bogus i.e. Ghost Worker.
(iii) Where the payment is made in cash whether it is done in presence of responsible officer.
(iv) Cross verify wage with certain employee, so that there will be assurance with system.
(v) Checking of Daily Attendance sheet, Absenteeism Statement, Manpower Planning and deployment.
(vi) Checking of Employee Signature at the Time of payment and Attendance Register.
(vii) Checking of Appointment/Retirement of Employee.

Answer 24. (b)

Role of the Audit Committee :

A. As per SEBI Guidelines :

1. Oversight of the Company's Financial reporting process and disclosure of correct financial information.
2. Recommending the appointment, removal and fixation of remuneration of the external auditor.

3. Review of annual financial statements before submission to the Board, with particular reference to statutory compliance, related party transactions, major accounting entries which have impact on company's profitability and financial strength etc.
4. Review of internal control system.
5. Review of adequacy of internal audit systems, the internal audit reports, corrective actions taken on the audit points etc., including frauds, malpractices.
6. To look into the reasons for substantial defaults in payments to the lenders and creditors.

B. As per sec. 292A of the Companies Act, 1956 :

1. To have discussions with statutory auditors periodically about internal control systems, the scope of audit, observations of auditors and review annual and half yearly financial statements before submission to the Board.
2. To investigate any matter in relation to any of the above matters or referred to it by the Board.

Q. 25. What do you understand by "Anti-dumping duty"? Briefly explain the provisions in the Cost Accounting Records Rules and Cost Audit Report Rules, 2001 covering this aspect.

Answer 25.

Anti-dumping duty :

When a product or commodity is exported at a price which is lower than its cost of production in the exporting country, it is treated as 'Dumping'. As this practice affects the competitiveness of manufacturers/ producers of that product/commodity in the importing country, the Government of that country usually, in order to protect the interests of those producers, levy an additional import duty which is called '**Anti-dumping Duty**'.

The W.T.O. under GATT' 94 had laid down the norms and criteria for levy of such duties. As this exercise calls for detailed analysis and verification of the cost of production, the *Cost Accounting Records Rules* prescribed during the last few years provide for maintenance of proper records-whenever W.T.O. provisions are attracted to identify the competitiveness of the product in the domestic as well as global market and the expenses, if any, incurred to combat the competition arising out of W.T.O. provisions.

So, levy of such Anti-dumping Duty is permissible as per W.T.O. agreement, Anti-dumping action can be taken only when there is an Indian industry producing "like articles".

Dumping duty for W.T.O. Countries :

Section 9B provides restrictions on imposing dumping duties in case of imports from W.T.O. countries or countries or countries given "Most Favoured Nation" by an agreement. Dumping duties can be levied on import from such countries, only if Central Government declares that import of such articles in India causes material injury to industry established in India or materially retards establishment of industry in India.

Quantum of Dumping Duty :

The anti-dumping duty will be dumping margin or injury margin whichever is lower. Injury margin means difference between fair selling price of domestic industry and landed cost of imported product. Landed cost will include 1% and basic custom duty.

Adequate statistical records shall also be maintained to identify the market share of the product manufactured and the likely impact thereon on account of competitive goods imported into the company. These records shall indicate, inter alia, the total volume of imports, names of importers, countries of origin and contain such empirical evidence as to show whether such imports can be constructed as dumping and affecting the market share of the product. Proper records shall also be maintained containing such details as may be necessary to show that the export price of the product is not such as to be constructed as dumping in the importing country, by applying the provisions of W.T.O. regarding antidumping measures under Article VI of GATT' 94.

The Cost Audit (Report) Rules, 2001, calls for the Auditors observation/suggestion on steps required to strengthen the company under the competitive environment especially with regard to need for protection from cheaper imports, if any. For this purpose, the company is required to provide data in para 22 of the Annexure to the Cost Audit Report.

Q. 26. List the tasks that can be performed by a CMA in practice in the following areas :

- **(a) Direct Tax Laws**
- **(b) Management consultancy**
- **(c) Central Excise**

Answer 26.

The scope of work available to a practicing Cost and Management Accountant under specified areas are as follows :

(a) Direct Tax Laws :

- (i) A Cost Accountant can appear before the Income –Tax Authorities / Appellate Tribunal as authorized representative of the assessee , as per section 288(2)(v) of Income Tax Act and Rules 49 and 50(3) of Income Tax Rules.
- (ii) A Cost Accountant can register as Certified Valuer of stocks, shares, debentures etc.

(b) Management consultancy :

- (1.1) Reviewing the adequacy of existing management information system and rationalizing the information flow in order to weed out junk reports and returns from existing system.
- (1.2) Strengthening and streamlining the internal monitoring and appraisal machinery through Integrated Reporting System.
- (1.3) Developing new Management Information Systems.
- (2) Advising management on the use and interpretation of information.
- (3) Assisting in developing Long Range Corporate Plan.

(c) Central Excise :

- (i) Conducting Excise Valuation Audit u/s 14A of the Central Excise Act, 1944
- (ii) Conducting Special Audit u/s 14AA of the Central Excise Act, 1944
- (iii) Acting as 'Valuers' in the category of 'accountants' u/s 4(3) of Estate Duty Act, 1953 provided the CMA is in practice for minimum 7 years.
- (iv) Certifying figures related to production of goods for captive consumption u/s 4 of the Central Excise Act,1944 and Rules 6(b)(ii) of the Central Excise (Valuation Rules), 1975.
- (v) Guiding a company in ascertaining the cost of production for current year for goods used in captive consumption.
- (vi) Certifying the deductions permitted from the invoice value to determine the assessable value.
- (vii) Certifying the deductions of equalized Sales Tax for approval of price list.
- (viii) Acting as authorized representative before the Customs, Excise, and Gold Control Appellate Tribunal and other authorities.

Q. 27. Explain whether the following amounts to professional misconduct by a Cost Accountant :

- **(a) A practicing member/firm maintains branch office in India – each under the separate charge of a member of ICWAI/ICAI.**

(b) A practicing Cost Accountant uses a visiting card in which he designates himself, besides as Cost Accountant, as Tax Consultant.

(c) A Cost Accountant in practice holds personal discussions /correspondence with prospective clients relating to his achievements and capabilities.

(d) A firm of Cost Accountants undertakes Cost Audit of a company. The Report is signed by a partner who has not actually supervised the Cost Audit work.

(e) A firm of Cost Accountants were appointed by a company to evaluate the costs of the various products manufactured by it for their information system. One of the partners of the firm of Cost Accountants was a non-executive director of the company.

Answer 27. (a)

It will not be misconduct only if the charge of the branch office is given to a member of ICWAI **only**.

Answer 27. (b)

Section 7 of the Cost Accountants Act, 1949 read with Clause 7 of Part I of the First Schedule to the said Act prohibits advertising of professional attainments or services of a member. It also restrains a member from using any designation or expression other than that of a Cost Accountant in documents through which the professional attainments of the member would come to the notice of the public. Under the clause, use of any designation or expression other than Cost Accountant for a Cost Accountant in practice, on professional documents, visiting cards, etc. amounts to a misconduct unless it be a degree of a university or a title indicating membership of any other professional body recognized by the Central Government or the Council. Thus, it is improper to use designation "Tax Consultant" since neither it is a degree of a University established by law in India or recognized by the Central Government nor it is a recognized professional membership by the Central Government or the Council.

Answer 27. (c)

Holding personal discussions/correspondence with prospective clients relating to his achievements and capabilities is permitted and does not amount to professional misconduct.

Answer 27. (d)

The Cost Audit Report may be authenticated by signature of any one of the partners of the firm conducting the Cost Audit. There is no such regulation that the partner actually doing the work must sign it. In the present case the report was signed by a partner of the firm undertaking the audit. So this does not amount to professional misconduct.

Answer 27. (e)

Clause 4 of Part I of the Second Schedule desists a Cost Accountant to express opinion on cost or pricing statements of an enterprise in which he, his firm or a partner in his firm has a substantial interest . Since the firm has been appointed to evaluate the costs of the various products manufactured by it for their information system, it can be construed to be a misconduct under Clause (4) Part I of the Second Schedule to Cost Accountants Act, 1949.

Q. 28. Write short notes on :

(a) The Cost Audit and Assurance Standard Board.

(b) ICWAI as IFAC member.

Answer 28. (a)

The Institute of Cost and Works Accountants of India (ICWAI) is committed to the goal of enabling the cost and management accounting profession in India to provide services of high quality in the public interest as per the international standards. ICWAI has developed and promulgated technical standards and other professional literature to realize this goal. The ICWAI being one of the founder members of the IFAC, the standards are being developed and promulgated by the Cost Audit & Assurance Board (CAAB) under the authority of the council of ICWAI are in conformity with the corresponding International Standards issued by the International Auditing and Assurance Standards Board (IAASB), established by IFAC.

The primary objectives of CAAB may be summarized as follows:

- To identify the areas in which Standards on Quality Control and Engagement Standards are required to be developed after reviewing the existing and emerging audit practices worldwide;
- To serve the public interest by formulating and setting high-quality auditing and assurance standards and by facilitating the convergence of international and national standards, thereby enhancing the quality and uniformity of practice throughout the world and strengthening public confidence in the auditing and assurance profession.
- To demonstrate to the regulators, investors, business community, interested third parties and the wider public about commitment to upholding and developing professional standards that command public confidence and to provide comfort and assurance to users of financial statements, regulators and third parties.
- To establish appropriate quality assurance standards and guidelines in relation to audit practice of the firms that are considered essential in the interest of the profession, in the public interest and to comply with the requirements of ICWAI's professional requirements as well as Statements of Membership Obligation (SMO)-l on Quality Assurance issued by the International Federation of Accountants (IFAC). The SMOs clarify and strengthen IFAC's membership obligations and seek to enhance the performance of accountants worldwide,
- To provide support and guidance to help audit firms to develop and improve their practices,
- To take up a program of practice review which applies to all practicing members in India who hold a Certificate of Practice (COP) of ICWAI.

Answer 28. (b)

The Institute of Cost and Works Accountants of India is one of the founder members of the International Federation of Accountants (IFAC). The mission of the IFAC is "the worldwide development and enhancement of an accountancy profession with harmonized standards, able to provide services of consistently high quality in the public interest. "In pursuing this mission, the IFAC Board has established the International Auditing and Assurance Standards Board (IAASB) to develop and issue, in the public interest and under its own authority, high quality auditing and assurance standards for use around the world. The ICWAI being a member of the International Federation of Accountants (IFAC), the Auditing and Assurance Standards developed and promulgated by the ICWAI are required to be in harmony, to the extent possible in the light of the conditions prevailing in India, with the corresponding International Standards on Auditing, International Standards on Review Engagements, International Standards on Assurance Engagements, International Standards on Related Services or International Standards on Quality Control, issued by the International Auditing and Assurance Standards Board (IAASB) of the IFAC (Appendix – C). IFAC also issues policy positions on topics where the profession's expertise is most relevant.

IFAC has long recognized the need for a globally harmonized framework to meet the increasingly international demands that are placed on the accountancy profession. IFAC's standard-setting boards follow a due process that supports the development of high quality standards in the public interest in a transparent, efficient, and effective manner. These standard-setting boards all have Consultative Advisory Groups, which provide public interest perspectives and include public members. IFAC's Public Interest Activity Committees (PIACs) – the International Auditing and Assurance Standards Board, International

Accounting Education Standards Board, International Ethics Standards Board for Accountants, and the Compliance Advisory Panel – are subject to oversight by the Public Interest Oversight Board (PIOB). IFAC has also issued Auditing and Assurance Standards, which are adopted by all the members institutes from different countries.

IFAC regulations also require that the audit firm should establish a system of quality control designed to provide it with reasonable assurance that the firm and its personnel comply with professional standards and regulatory and legal requirements, and that reports issued by the firm or engagement partners are appropriate in the circumstances. In view of the present day requirements for upholding the image and dignity of the profession as a whole and for more close monitoring of the quality control standards of its practicing members, The Institute, being a member body of the International Federation of Accountants (IFAC) and is committed to follow the international standards in addition to its own standards.

Q. 29. What do you understand by :

(a) Margin of Dumping

(b) Green Room Meetings

(c) 'Independence' in <u>assurance engagements</u> as per ISA 290

Answer 29. (a)

'Margin of dumping' is the difference between the Normal value and the export price of the goods under reference. It is generally expressed as a percentage of the export price. Both 'normal value' and export price must be compared at the same level, i.e. ex-factory level. 'Normal value' means comparable price at which goods under consideration are sold in ordinary course of trade in the domestic market of the exporting country. 'Export price' is the price at which the goods are allegedly dumped in the importing country.

Answer 29. (b)

Green Room Meetings : The "Green Room" is a phrase taken from the informal name of the WTO's director-general's conference room. It is used to refer to meetings of 20-40 delegations, usually at the level of heads of delegations. These meetings can take place elsewhere, such as at Ministerial Conferences, and can be called by the minister chairing the conference as well as the director-general . These meetings help in initiating informal meeting within the WTO(World Trade Organization).

Answer 29. (c)

The term 'independence' in assurance engagements refers to :

(i) **Independence of mind:** Members of assurance teams should have a state of mind that permits the expression of conclusion without being influenced by factors that compromise professional judgment allowing an individual to act with integrity , objectivity and professional skepticism .

(ii) **Independence in appearance:** The members of assurance team should avoid occurrence of circumstances and facts that are so significant that a reasonable and informed third party having knowledge of all relevant information, including safeguards applied would reasonably assume that the members of assurance team have compromised on integrity, objectivity or professional skepticism.

Circumstances that create threat will differ in different situations and nature of assurance engagements requiring different safeguards. The members should identify , evaluate and address threats to independence rather than merely comply with set of rules which may be arbitrary and therefore not in public interest.

Q. 30. List the main functions of WTO.

Answer 30.

The World Trade Organisation is the main organ of implementation of the Multilateral Trade Agreements (MTAs). After World Bank and IMF, this is the third biggest International Organisation in Finance and Trade matters. The main functions of WTO are as follows :

(i) Facilitate the management of the MTAs and the Plurilateral Trade Agreements for fulfillment of their obligations.

(ii) All Multilateral Trade Relations concerning the above agreements will be negotiated by the Members in this forum.

(iii) WTO will also facilitate implementation of the results of the negotiations as decided by the Ministerial Conference.

(iv) The WTO shall administer the Understanding on Rules and Procedures Governing the Settlement of Disputes, forming part of the Agreements (MTAs and PTAs.)

(v) The WTO is responsible for administration of the Trade Policy review Mechanism (TPRM) forming part of the Agreement.

(vi) WTO is also the organ for establishing co-ordination with other Wings of the UNO such as the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (IBRD) and its affiliated agencies.

FINAL EXAMINATION

(REVISED SYLLABUS - 2008)

GROUP - IV

Paper-18 : BUSINESS VALUATION MANAGEMENT

Q1. (a) State whether following statements are True (T) or False (F).

(i) The concept of 'value' is different from cost and price.

(ii) Under DCF mode of asset valuation, we need to estimate the cash flows during life of the asset.

(iii) EVA is inversely related to shareholders' value.

(iv) Replacement value of an asset is future cost of a new asset at the time of replacement.

(v) Take-over defenses are also referred to as anti-takeover defenses.

(vi) Value Gap in context of acquisitions refer to the difference between book value and the purchase price of a company.

(vii) The CAPM model assumes perfect market competition.

(viii) Intangible assets are treated as fictitious assets.

(ix) Insurable Value of real property doesnot include site value.

(x) The market value of a property is the price paid to acquire it.

(xi) Employee benefits are treated as long-term liabilities.

(xii) Brand value need not be amortized.

(xiii) Exchange ratio of equity shares of merging firms is determined by their market price alone.

(xiv) When the right is not exercised, value of option is equal to market price of underlying asset.

(xv) Hedging protects against the price risk but not against gains or losses.

(xvi) Goodwill is essentially a container for a customer's complete experience with the offer and the company.

(xvii) Intrinsic value of share is a subjective concept and cannot be measured.

(xviii) Costs of R&D performed under contracts are capitalized as inventory.

(xix) For valuation of equity share under yield method , knowledge of capital employed is not required.

(xx) If a patent is developed internally, its cost is capitalized.

Answer 1. (a)

(i) True

(ii) True

(iii) False — (EVA is directly related to shareholders' value)

(iv) False — (Replacement value is the current cost of a new asset of same kind)

(v) True

(vi) False — (Value Gap is the difference between intrinsic value and purchase price of a company.)

(vii) True

(viii) False — (Intangible assets are treated as fixed assets)

(ix) True

(x) False — (The price paid may or may not represent the market value of the property)

(xi) True

(xii) True

(xiii) False

(xiv) False — (Value of option is zero)

(xv) True.

(xvi) False — (It is brand and not goodwill)

(xvii) False — (Intrinsic value is measured as Net Assets of a Company /No. of shares)

(xviii) True

(xix) True.

(xx) False — (The cost has to be expensed.)

Q1. (b) Fill in the blanks with appropriate words :

(i) Premium paid by a target company to buy back its stock from a potential acquirer is called __________ (Greenmail/Whitemail)

(ii) __________ is a Government granted right to authors, sculptures, painters for their creations. (Patent/Copyright)

(iii) Assets held as stock in trade are not __________ (investments/disinvestments.)

(iv) In DCF valuation , the value of an asset is present value of __________ cash flows on the asset. (actual/expected).

(v) Networth of a firm as per Balance Sheet is called its __________ . (book value/market value)

(vi) If expected rate of return is more than required rate, stock should be __________ . (bought/sold)

(vii) Revaluation of assets is undertaken to attract investors by indicating to them __________ value of the asset. (current/future).

(viii) Synergy is whole that is __________ than sum of its parts. (less/more)

(ix) In a conglomerate merger, the concerned companies are in __________ lines of business. (related/ unrelated)

(x) For trading investments, the valuation is at __________ value. (book/market)

Answer 1. (b)

(i) Greenmail

(ii) Copyright

(iii) investments

(iv) expected

(v) book value
(vi) bought
(vii) current
(viii) more
(ix) unrelated
(x) market

Q. 2. (a) Explain the term 'fair market value'. State the assumptions on which it is based.

(b) Derive the fair value of share of DEF Ltd. based on Balance Sheet of the company as on 31st March, 2009 and other information given below :

Liabilities	Rs.	Assets	Rs.
Equity share capital (5 lac Shares @Rs. 15 each)	75,00,000	Land Building	21,00,000 34,50,000
General Reserve	22,50,000	Plant & Machinery	42,00,000
Dedentures(14%)	15,00,000	Sundry Debtors	9,00,000
Sundry Creditors	7,50,000	Inventory	12,00,000
Bank O/D	6,00,000	Cash and Bank	3,00,000
Provision for Taxation	1,50,000	Patents and Trade marks	4,50,000
		Preliminary Expenses	1,50,000
	1,27,50,000		1,27,50,000

The profits of the company for the past four years are as follows :

	Rs.
2006	18,00,000
2007	22,50,000
2008	31,50,000
2009	34,50,000

Every year the company transfers 30% of its profits to the General Reserve.The average rate of return for the industry is 27% of share value.

On 31st March, 2009 an independent expert valuer assessed the value assets as follows :

	Rs.
Land	3900000
Buildings	6000000
Plant and Machinery	4800000
Debtors(excluding bad debts)	750000
Patents and Trade marks	300000

Answer 2. (a)

'Fair market value' is defined as the price expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arm's length in an open market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts.

From the definition itself it is clear that the concept of 'fair market value' is based on certain assumptions as follows :

(i) The hypothetical buyer is reasonably prudent and rational but is not motivated by any synergistic influences.

(ii) The business will continue as a going concern and not be liquidated.

(iii) The hypothetical transaction will be conducted in cash or equivalents.

(iv) The parties are willing and able to consummate the transaction.

These conditions are assumed because they yield a uniform standard of value after applying generally accepted valuation techniques which allows meaningful comparison between businesses similarly situated. It should be noted that there is no clear legal definition of fair market value. The onus is on the valuer to get the balance right as well as independent.

Answer 2. (b)

Calculation of share value based on net assets method :

Assets	**Rs.**
Land	39,00,000
Buildings	60,00,000
Plant and Machinery	48,00,000
Debtors(excluding bad debts)	7,50,000
Inventory	12,00,000
Cash & Bank	3,00,000
Patents and Trade marks	3,00,000
	1,72,50,000
Less : **Liabilities** :	
Debentures(14%)	15,00,000
Sundry Creditors	7,50,000
Bank O/D	6,00,000
Provision for Taxation	1,50,000
Net Assets	1,42,50,000

Intrinsic value of share = Net assets/No.of shares

$$= \frac{\text{Rs. } 1,42,50,000}{5,00,000}$$

= Rs. 28.50

Calculation of share value based on dividend yield method :

	Rs.
Total profits of last 4 years	1,06,50,000
Less : Bad debts	1,50,000
Total	1,05,00,000
Average profit (Rs.10500000/4)	26,25,000
Less : Transfer to reserve (30% of Rs. 2625000)	7,87,500
Profit available for dividend	18,37,500

Rate of dividend $= \frac{18,37,500}{75,00,000} \times 100$

$=24.5\%$

Valuation of share based on yield method = $\frac{\text{Rate of dividend}}{\text{Normal rate of return}} \times \text{Normal value of share.}$

$= \frac{24.5}{27} \times 15$

= Rs. 13.61

Fair value of share = $\frac{\text{Rs. } 28.50 + 13.61}{2}$

= Rs. 21.06

Q. 3. (a) From the books of BCA Ltd. following information is available. Find the value of its equity shares based on ROCE (return on capital employed) method.

Rs. in lacs

Year	Capital employed	Profit
2005	**40**	**6**
2006	**52**	**10**
2007	**66**	**12**
2008	**70**	**16**
2009	**82**	**22**

The expected rate of return in market is 15%.

Answer 3. (a)

Year	Capital employed (Rs. In lacs)	Profit (Rs. in lacs)	Return on capital employed (%)	Weight assigned (most recent year highest weight)	Product
2005	40	6	15	1	15.0
2006	52	10	19.2	2	38.4
2007	66	12	18.2	3	54.6
2008	70	16	22.9	4	91.6
2009	82	22	26.8	5	134.0
				15	333.6

Weighted average rate of return on capital employed = $\frac{333.60}{15} = 22.24$

Value of share $= \frac{\text{Rate of return}}{\text{Market expected rate of return}} \times \text{Nominal value of Share}$

$= \frac{22.24}{15} \times 10$ = Rs.14.83.

Q. 3. (b) Under the Discounting Cash Flow Method, companies are valued by discounting free cash flows. What do you understand by free cash flows?

Answer 3. (b)

Free cash flow is the post tax cash flow generated from operations of the company after providing for investments in fixed capital and net working capital required for operations of the firm. Thus it is the cash flow available for distribution to shareholders (by way of dividend and buyback of shares) and lenders (by way of interest payment and debt repayment). Symbolically, free cash flow = Net income (+) Depreciation (+/–) Non cash items (–) Changes in Working Capital (–) Capital expenditure (+) (New debt issues-repayment of debt) (–) preference dividends.

Q. 3. (c) Define EVA. List the steps in calculation of EVA.

Answer 3. (c)

EVA is a performance yard-stick that measures the creation of shareholder value. EVA is calculated by deducting cost of capital (both equity and debt) from operating profit. There are four steps in calculation of EVA.

1. Calculation of NOPAT (Net Operating Profit After Tax)
2. Calculation of Total Invested Capital (TC)
3. etermination of WACC (Weighted Average Cost of Capital)
4. Calculation of EVA = NOPAT – TC × WACC%

Q. 3. (d) Calculate the market price (MP) D Ltd.'s share under Walter's model based on following information :

EPS	= Rs. 10
Dividend per share	= Rs. 6.25
Cost of capital	= 12%
IRR	= 15%

Answer 3. (d)

MP = [D+(Ra/Rc)(E-D)] /Rc,

Where,

MP = market price of equity share

D = dividend per share

E = earning per share

Ra = IRR on investment

Rc = Cost of capital

$$MP = \frac{\left[6.25+\left(\frac{.15}{.12}\right)(10-6.25)\right]}{0.12}$$

$$= \frac{[6.25+(1.25)(3.75)]}{0.12} = \frac{[6.25+4.69]}{0.12}$$

$$= \frac{10.94}{0.12} = \text{Rs. } 91.16$$

Q. 4. (a) A is considering takeover of B Ltd. and C Ltd. The financial data for the three companies are as follows :

Particulars	A Ltd.	B. Ltd	C .Ltd
Equity Share Capital of Rs. 10 each (Rs. Millons)	**900**	**360**	**180**
Earnings (Rs. Millons)	**180**	**36**	**36**
Market price of each share (Rs.)	**120**	**74**	**92**

Calculate :

(i) Price earning ratios.

(ii) Earning per share of A Ltd. after the acquisition of B Ltd. and C Ltd. separately. Will you recommend the merger of either/both of the companies? Justify your answer.

Q. 4. (b) List defensive strategies available to a company in case of hostile takeover.

Answer 4. (a)

Calculation of Price Earning ratios :

Particulars	A Ltd.	B. Ltd	C .Ltd
Earnings (Rs. Millons)	180	36	36
No. of shares (millions)	90	36	18
EPS (Rs.)	2	1	2
Market price per share (Rs.)	120	74	92
PE Ratio	60	74	46

EPS of A Ltd. after acquisition of B Ltd. and C Ltd.

Exchange ratio or rate = Buyer's PE Ratio/Seller's PE Ratio.

Particulars	A Ltd.	B. Ltd	C .Ltd
Exchange ratio in A Ltd.	—	0.81	1.30
Value of shares (Rs. millions)	10800	2664	1656
No. of shares of A Ltd. to be given (millions)	—	2664/120	1656/120
EPS (Rs.)	—	22.22	13.8
Total earning after acquisition (Rs. million)	—	216	216
Total number of shares		112.22	103.8
EPS after acquisition		1.93	2.08

EPS of A Ltd. after acquisition with C Ltd. is higher than EPS of A Ltd. itself.Hence merger with only C Ltd. Is suggested to increase the value to shareholders of A Ltd.

Answer 4. (b)

The defensive strategies available in case of hostile takeover may be preventive measures and active measures.

(i) Preventive measures are undertaken to reduce the chances of hostile takeover bids.

They are as follows :

(A) Poison pill is a tactic to make a takeover more expensive or unattractive so that task of the bidder becomes more difficult.

(B) Golden parachutes- Unacceptably high compensation packages that must be paid to the senior managers in case of termination, so raider loses interest.

(C) Shark repellents-Amendments made in company charter to forestall takeover attempts.

(D) Crown jewel option- is to sell the valuable assets of the firm at below market price.

(ii) Active measures- are employed when hostile bids are launched.

(A) White Knight- A friendly party saves the company from hostile takeover.

(B) Greenmail-Premium paid by a target company to buy back its stock from a potential acquirer.

(C) Standstill agreements- Target company reaches a contractual agreement with potential buyer that buyer will not increase his holding in the target firm for a particular period.

(D) Capital structure changes-These includes ownership reorganization, employee stock ownership plans, leveraged buyouts etc.

(E) Pac-Man defense- The company under attack turns table by bidding for the acquirer company.

(F) Litigation- One of the most common antitakeover measures and used as a delaying tactic.

(G) Trigger the application of state anti-takeover laws.

Q. 5. XY Pvt. Ltd., a retail florist, is for sale at asking price of Rs. 31,00,000. You have been contacted by a potential buyer who has asked you to give him opinion as to whether the asking price is reasonable. The potential buyer has only limited information about XY Pvt . Ltd He does not know that annual gross sales of XY Pvt. Ltd is about Rs. 4100,000 and that last year's tax return reported an annual profit of Rs. 420,000 before tax.

You have collected the following information from financial details of several retail florists that were up for sale in the past :

TABLE I

	Price- to- sale(P/S) Ratio	Price-to-earnings(P/E)
Number of firms	38.00	33.00
Mean Ratio	0.55	3.29
Coefficient of Variation	0.65	1.52
Maximum Ratio	2.35	6.29

TABLE II

Top 10 Players (in descending P/S order)

Firm	P/S Ratio	P/E Multiple
1	2.35	5.65
2	1.76	6.29
3	1.32	5.31
4	1.17	4.60
5	1.09	3.95
6	1.01	3.25
7	0.96	3.10
8	0.85	2.96
9	0.72	2.90
10	0.68	2.75

Offer your opinion on reasonableness of the asking price.

Answer 5.

Average P/S ratio of Industry	= 0.55
Average P/E ratio of Industry	= 3.29
Co-efficient of variation of P/S ratio	= 0.65
Co-efficient of variation of P/E ratio	= 1.52

The co-efficient of variation of P/S ratio is much lower than the co-efficient of variation of P/E ratio. From this we can infer that there is a wider dispersion in case of P/E ratio than P/S ratio. Therefore it would be better to take P/S ratio as a guideline.

Asking price of XY Pvt. Ltd = Rs.31,00,000

Annual sales of XY Pvt. Ltd = Rs. 41,00,000

Asking P/S Ratio = $\frac{31,00,000}{41,00,000} = 0.76$

Thus P/S ratio of XY Ltd.is higher than industry average of 0.55.

However it is much lower than maximum P/S ratio of 2.35.

P/S ratio of XY Ltd. is between 8th and 9th top players in the field.

If sales are likely to remain same in coming years the asking price may be $= \frac{(0.85+0.72)}{2} \times \text{Rs. } 41,00,000$

= Rs. 32,18,500.

Thus Rs. 31,00,000 appears to be reasonable if sales figure do not fall. However the buyer should make sure that the florist's accounts depicts true and fair view of the state of affairs of the business before arriving to a decision.

Q. 6. From the following data calculate the cost of merger :

i) when the merger is financed by cash

ii) when the merger is financed by stock

Particulars	Firm A	Firm B
Market price per share (Rs.)	**60**	**15**
Number of shares	**1,00,000**	**50,000**
Market value of firm (Rs.)	**60,00,000**	**750000**

Firm A intends to pay Rs. 10,00,000 cash for B if B's market price reflects only its value as a separate entity.

Answer 6.

(i) Cost of merger when the merger is financed by cash :

Cost of merger = $(\text{Cash-MV}_B) + (\text{MVB-PB}_B)$

Where, MV_B = Market value of share.

PB_B = Intrinsic value of Firm B

= (10,00,000–7,50,000) + (7,50,000–7,50,000)

= Rs. 2,50,000+0

= Rs. 2,50,000.

If cost of merger becomes negative, shareholders of Firm A gain higher by acquiring Firm B in terms of its market value.

ii) Cost of merger when the merger is financed by stock :

Cost of merger $= \alpha\, PV_B - PV_B$

Where, $\alpha\, PV_B$ = Value in firm A that firm B's shareholders get.

No. of shares equivalent to Rs. 10,00,000 = 10,00,000/60

= 16,667

Apparent cost of merger :

16667 shares @ Rs 60 = Rs. 10,00,000

Less,Value of firm B = Rs. 7,50,000

Apparent Cost of merger = Rs. 2,50,000

PV_{AB} = $PV_A + PV_B$

= Rs. 60,00,000 + 7,50,000

= Rs. 67,50,000.

Proportion that Firm B's Shareholders get in Firm A's capital structure will be :

α = 16667/(100000+16667)

= 16667/116667

= 0.143

True cost of merger = (6750000 $\times$ 0.143-750000)

= 965250–750000

= Rs. 215250

As apparent cost is more than true cost, merger is beneficial to Firm B.

Q. 7. The summarized Balance Sheet of R Co. Ltd as on December, 2009 is given below :

Liabilities	Rs.	Assets	Rs.
Equity Share capital	20,00,000	Fixed assets	19,00,000
(2,00,000 @Rs.10 each)		Investments	1,00,000
13% Pref. share capital	1,00,000	Current assets:	
Retained earnings	4,00,000	Inventories 500000	
12% Debentures	3,00,000	Debtors 400000	
Current Liabilities	2,00,000	Bank 100000	10,00,000
	30,00,000		30,00,000

Negotiations for takeover of R Ltd. result in its acquisition by A Ltd. The purchase consideration consists of (i) Rs 330000, 13% debentures of A Ltd. for redeeming the 12% debentures of R Ltd., (ii) Rs. 1,00,000, 12% convertible preference shares in A Ltd. for the payment of preference share capital of R Ltd. (iii) 1,50,000 equity shares of A Ltd. to be issued at its current market price of Rs. 15 (iv) A Ltd. would meet dissolution expenses of Rs. 30,000.

The break-up figures of eventual disposition by A Ltd. of unrequired assets and liabilities of R Ltd.are :

Investments	**Rs. 1,25,000**
Debtors	**Rs. 3,50,000**
Inventories	**Rs. 4,25,000**
Payment of Current Liabilities	**Rs. 1,90,000.**

The project is expected to generate yearly operating CFAT of Rs.7,00,000 for 6years. It is estimated that fixed assets of R Ltd. would fetch Rs. 3,00,000 at the end of 6th year.

The firm's cost of capital is 15%. Comment on the financial prudence of merger decision of A Ltd. (PV at 15% rate of discount is 1st year 0.870; in 2nd year 0.756; in 3rd year 0.658 ;in 4th year, 0.572; in 5th year 0.496; and 6th year 0.432.)

Answer 7.

Cost of acquisition of R Ltd. under Break-up value method to A Ltd.

	Rs.
Sale proceeds of assets :	
Investments	1,25,000
Debtors	3,50,000
Inventories	4,25,000
	9,00,000
Add: Cash at bank of R Ltd.	1,00,000
I	10,00,000
Proposed Payments:	
Dissolution Expenses	30,000
Current Liabilities	1,90,000
13% Debentures	3,30,000
12% Convertible pref. shares	1,00,000
Equity share capital (15×1,50,000)	22,50,000
II	29,00,000
Net cost of acquisition (II - I)	19,00,000

NPV after merger :

Year	Cash flow after tax Rs.	Discount factor @ 15%	PV Rs.
1	7,00,000	0.870	6,09,000
2	7,00,000	0.756	5,29,200
3	7,00,000	0.658	4,60,600
4	7,00,000	0.572	4,00,400
5	7,00,000	0.496	3,47,200
6	7,00,000	0.432	3,02,400
6	3,00,000	0.432	1,29,600
			27,78,400
Less: Net Cost of acquisition			19,00,000
NPV after Merger			8,78,400

As the NPV is positive after merger, the proposal may be accepted.

Q. 8. (i) Why do M & A take place?

(ii) Why do they fail?

Answer 8. (i)

Mergers and Acquisitions take place to take advantage of the following :

(a) Synergy in operating economies- It is considered that total value from combination is greater than the sum of values the component companies independently. The reason is benefits derived from –

- Economies of scale through sharing of central services such as procurement, accounting, financial control, resources management, top level management and control.
- Economies of Vertical Integration by moving both forward (towards the customer) and backward (towards supplies of raw materials and inputs).
- Companies having complementary resources.
- Investible surplus funds leading to looking for investment opportunities.
- Eliminating inefficiencies by making use of unexploited opportunities to cut cost and improve revenues.

(b) Taxation advantages-Mergers take place to have benefits of tax laws and a profit earning company may merge with loss making one that will shield the income from taxation.

Answer 8. (ii)

Mergers fail mainly due to the following reasons :

(a) Lack of integration synergies.

(b) Key employees leaving the merged organization.

(c) Lack of common goals.

(d) Corporate culture clashes.

(e) Paying too much premium.

(f) Poor level of communication both internally and externally.

(g) Lack of sufficient due diligence by the acquiring company.

Q. 9. (i) XYZ Ltd . wants to acquire majority shares in SBF Ltd. The β factor of SBF Ltd. 's share is 1.2 and its current market price is Rs. 180 . The company is paying dividend of Rs. 15 p.a. The risk free rate is 5.5% and expected return on such securities 7%.

Calculate the value of share of SBF Ltd.

Answer 9. (i)

As per CAPM for valuation,

$E(R_i) = R_f + \beta\,[E(R_m) - R_f]$

Where,

$E(R_i)$ = Expected rate of return

$E(R_m)$ = Market rate of return

R_f = Risk free return

$E(R_i)$ = 5.5+1.2(7-5.5)

= 5.5 +1.2×1.5

= 5.5 + 1.8

= 7.3%

Dividend yield = Annual dividend/expected return.

= Rs. 15 /.073

= Rs. 205.

As per CAPM model value of a share is Rs. 205 against current market price of Rs. 180.

Amount of extra price that XYZ can pay is Rs. 205 – Rs. 180 = Rs. 25.

Q. 9. (ii) Explain the following :

(a) Take over by Reverse bid.

(b) Demerger.

Answer 9. (ii)

(a) Take over by Reverse Bid

Under normal circumstances, a 'take over' would mean that a larger company acquires a smaller company. However, there could be exceptional circumstances wherein a smaller company gains control of a larger one. Such a situation is referred to as 'take over by reverse bid'.

Take over by reverse bid could happen where already a significant per cent of the shareholding is held by the transfer company, to exploit economies of scale, to enjoy better trading advantages and other similar reasons.

The concept of take over by reverse bid has been successfully employed in schemes formulated for revival and rehabilitation of sick industrial companies.

(b) **Demerger :** The word 'demerger' is defined under the Income-tax Act, 1961. It refers to a situation where pursuant to a scheme for reconstruction/restructuring, an 'undertaking' is transferred or sold to another purchasing company or entity. The important point is that even after demerger, the transferring company would continue to exist and may do business.

Demerger is used as a suitable scheme in the following cases :

- Restructuring of an existing business
- Division of family-managed business
- Management 'buy-out'.

While under the Income tax Act there is recognition of demerger only for restructuring as provided for under sections 391 – 394 of the Companies Act, in a larger context, demerger can happen in other situations also.

Q. 10. Dr. M. Chatterjee has just completed her post qualification internship in a reputed medical hospital. She wants to buy the running practice of Dr. D Ganguly, a renowned child specialist located at Lansdowne in Kolkata. The revenues and the costs of this practice in 2009-10 were as under :

	Rs.
Revenue	**10,00,000**
Employee expenses	**3,00,000**
Annual rent for facilities	**1,00,000**
Rental for medical equipments	**80,000**
Medical insurance	**90,000**
The tax rate on income including local taxes and subscription	**35%**
The cost of capital for this practice	**10%**

The above and all the associated expenses are estimated to grow at 4% p.a. for the next 10 years if Dr. Ganguly continues to run practice. Dr. Chatterjee anticipates that upon the changeover there will be drop in revenue by 25% in the first year of her practice. The growth rate in revenue and expenses will

remain at 4% p.a. thereafter, i.e for year 2 onwards. Dr. M Chatterjee wants your advice for the price she should offer to Dr. Ganguly to purchase the latter's practice at Lansdowne, Kolkata.

Answer 10.

We make two evaluations of the practice —

1. Run by Dr. D Ganguly as if he is continuing as before, and
2. Run by Dr. M Chatterjee assuming that she has bought the practice from Dr. D Ganguly.

1. Cash flow in year 1 = (Revenue – Operating Expenses) (1-Tax rate)
   = [10,00,000(1.04) –(3,00,000+1,00,000+ 80,000+90,000) (1.04)] (1-0.35).
   = [1040000- 592800] × (0.65)
   = Rs. 290680.

With the growth rate of 4% p.a and using the cost of capital as discount rate and assuming that the practice will have no terminal value after 10 years, the value of practice :

Value of practice = CF $[1-(1+g)^n / (1+r)^n] / (r-g)$
= Rs. 290680 $[1-\{(1.04)^{10} / (1.10)^{10} \}] (0.10 – 0.04)$
= Rs. 290680$[\{(1.10)^{10} – (1.04)^{10} \}/(1.10)^{10}] (0.06)$
= Rs. 290680 [(2.5937–1.4802)/ 2.5937](0.06)
= Rs.290680[1.1135 / 2.5937]/(0.06)
= Rs. 290680 (0.4293/ 0.06)
= Rs. 290680 × 7.155
= Rs. 2079815.4

2. Similarly cash flow in year 1 under Dr. Chatterjee,
   = Rs.[750000 × (1.04)- 592800] × 0.65
   = Rs.187200 × 0.65
   = Rs.121680

Value of practice of Dr. Chatterjee = Rs. 121680 × 7.155
= Rs. 870620.4

The difference of Rs. 1209195 is attributable as the value of Dr. D. Ganguly the key person.

Dr. Chatterjee should offer Rs. 870620 to Dr. Ganguly for practice. Should Dr. Ganguly agree to stay with practice for the transition period after transfer of business , a higher price may be paid.

Dr. Chatterjee should ensure by the agreement of transfer of practice that Dr. Ganguly cannot start a competing practice and extract business from Dr. Chatterjee for the foreseeable future.

Q. 11. Why do Companies want to measure Intellectual Capital. List the popular approaches to IC measurement.

Answer 11.

Companies want to measure Intellectual Capital due to the following reasons :

(i) Alignment of IC resources with strategic vision.
(ii) To support and maintain various parties' awareness of the company.
(iii) To help bridge the present and the past development processes.
(iv) To influence stock prices , by making several competencies visible to current and potential customers.
(v) To provide identity to the employees by company name thus boosting the employee's morale. Knowledge of employees and customers will stimulate the development of a set of policies to increase customer satisfaction and customer loyalty.

(vi) To assess the effectiveness of a company's IC utilisation- To allocate resources between various business units in such a way that full value is realized from acquisition and joint ventures.

(vii) To determine the most effective management incentive structures.

There are five popular approaches to intellectual capital management :

(i) EVA™ (Economic Value Added) as a measure was developed in 1980's by New York consultancy firm, Stern Stewart & Co. In simple terms,

EVA = Net Operating Profit after Taxes- (Capital × Cost of Capital)

(ii) Human Resource Accounting is a set of accounting methods that seek to settle and describe the management of a company's staff. It focuses on employees education, competence and remuneration.

(iii) Intangible Asset Monitor –This has been developed by Karl-Erik Sveiky. The IAM is based on the fundamental premise of people being an organization's only profit generators. According to Sveiky, people are only true agents of any business, all other assets whether tangible products or intangible relations are result of human actions and depend ultimately on people for their continued existence.

(iv) The Skandia Navigator : The Skandia 'Navigator' is perhaps the best known business model developed to identify the intangible assets that are key to company's performance. The Navigator is designed to provide a balanced picture of financial and intellectual capital. The Navigator framework, as expected has its top end a series of measures relating to *financial focus*. But it also has 'below the line' measures of intellectual capital which involve four areas and two dimensions. These are customer focus, process focus, renewal and development focus and human focus acting as binding force of customer, process, renewal and development and finance.

(v) The Balanced Scorecard (BSC) developed by Prof. Robert Kaplan of Harvard Business School is an organizational framework for implementing and managing a strategy at all levels of an enterprise by linking objectives, initiatives, and measures to an organization's vision and strategy. The BSC translates business's vision and strategy into objectives and measures across four balanced perspectives – financial performance, customers, internal business processes, organizational growth, learning and innovation.

(vii) The performance prism is a second generation performance measurement and management approach developed by Cranfield School of Management in collaboration with consultancy Accenture. It recognizes the importance of companies taking a holistic approach to stakeholder management in today's culture of involvement.

Q. 12. (a) A Company is in the process of setting up a production line for manufacturing a new product. Based on trial runs conducted by the company, it was noticed that the production lines output was not of the desired quality. However, company has taken a decision to manufacture and sell the sub-standard product over the next one year due to the huge investment involved.

In the background of the relevant accounting standard, advise the company on the cut-off date for capitalization of the project cost.

(b) On 1.4.09 E Ltd. had sold some of its fixed assets for Rs. 100 lakhs [written down value Rs. 250 lakhs]. These assets were revalued earlier. As on 1.4.09 the revaluation reserve corresponding to these assets stood at Rs. 200 lakhs. The profit on sale of property as shown in the profit and loss statement represented the transfer of this amount. Loss on sale of the asset was included in the cost of goods sold etc.

Answer 12. (a)

As per provisions of AS 10 'Accounting for Fixed Assets', expenditure incurred on start-up and commissioning of the project, including the expenditure incurred on test runs and experimental production, is usually capitalized as an indirect element of the construction cost. However, the expenditure incurred after the plant has begun commercial production i.e., production intended for sale or captive consumption, is not capitalized and is treated as revenue expenditure even though the contract may stipulate that the plant will not be finally taken over until after the satisfactory completion of the guarantee period. In the present case, the company did not stop production even if the output was not of the desired quality, and continued the sub-standard production due to huge investment involved in the project. Capitalization should cease at the end of the trial run, since the cut-off date would be the date when the trial run was completed.

Answer 12. (b)

As per para 14.4 and para 32 of AS 10 on Accounting for Fixed Assets, on disposal or a previously revalued item of fixed asset, the difference between net disposal proceeds and the net book value is normally charged or credited to the profit and loss statement except that to the extent such a loss is related to an increase which was previously recorded as a credit to revaluation reserve and which has not been subsequently reversed or utilised, it is charged directly to that account. The amount standing in revaluation reserve following the retirement or disposal of an asset which relates to that asset may be transferred to general reserve.

Accordingly, the following journal entries are to be passed.

(Rs. in lakhs)

Profit on Sale of Property	Dr.	200	
To Loss on Sale of Fixed Assets			150
To General Reserve			50

[Alternatively, these entries can be passed through Revaluation Reserve Account. That is, 'Profit on Sale of Property' can be credited first to Revaluation Reserve Account and then, this Reserve will be debited with loss on sale of fixed assets (included in 'Cost of Goods Sold etc.') and the balance will be transferred to General Reserve.]

Q. 13. How will you value the inventories in the following cases:

(i) Raw material was purchased at Rs. 100 per kilo. Price of raw material is on the decline. The finished goods in which the raw material is incorporated is expected to be sold at below cost. 10,000 kgs. of raw material is on stock at the year end. Replacement cost is Rs. 80 per kg.

(ii) In a production process, normal waste is 5% of input. 5,000 MT of input were put in process resulting in a wastage of 300 MT. Cost per MT of input is Rs. 1,000. The entire quantity of waste is on stock at the year end.

(iii) Per Kg of finished goods consisted of :

Material cost	**Rs. 100 per kg.**
Direct labour cost	**Rs. 20 per kg.**
Direct variable production overhead	**Rs. 10 per kg.**

Fixed production charges for the year on normal capacity of one lakh kgs. is Rs. 10 lakhs. 2,000 kgs. of finished goods are on stock at the year end.

Answer 13.

(i) As per para 24 of AS 2 on Valuation of Inventories, materials and other supplies held for use in the production of inventories are not written down below cost if the finished product in which they will be incorporated are expected to be sold at or above cost. However, when there has been a decline in the price of materials and it is estimated that the cost of the finished products will exceed net realisable value, the materials are written down to net realisable value. In such circumstances, the replacement cost of the materials may be the best available measure of their net realisable value.

Hence, in the given case, the stock of 10,000 kgs of raw material will be valued at Rs. 80 per kg. The finished goods, if on stock, should be valued at cost or net realisable value whichever is lower.

(ii) As per para 13 of AS 2, abnormal amounts of waste materials, labour or other production costs are excluded from cost of inventories and such costs are recognised as expenses in the period in which they are incurred.

In this case, normal waste is 250 MT and abnormal waste is 50 MT.

The cost of 250 MT will be included in determining the cost of inventories (finished goods) at the year end. The cost of abnormal waste amounting to Rs. 50,000 (50 MT × Rs. 1,000) will be charged in the profit and loss statement.

(iii) In accordance with paras 8 and 9 of AS 2, the costsof conversion include a systematic allocation of fixed and variable production overheads that are incurred in converting materials into finished goods. The allocation of fixed production overheads for the purpose of their inclusion in the costs of conversion is based on the normal capacity of the production facilities.

Thus, cost per kg. of finished goods can be computed as follows:

	Rs.
Material cost	100
Direct labour cost	20
Direct variable production overhead	10
Fixed production overhead $\left(\frac{\text{Rs. }10,00,000}{1,00,000}\right)$	10
	140

Thus, the value of 2,000 kgs. of finished goods on stock at the year end will be Rs. 2,80,000 (2,000 kgs. × Rs. 140).

Q. 14. (a) An unquoted long term investment is carried in the books at a cost of Rs. 10 lakhs. The published accounts of the unlisted company received in May, 2009 showed that the company was incurring cash losses with declining market share and the long term investment may not fetch more than Rs. 2 lacs.

(b) What is Current Investment?

Answer 14. (a)

Investments classified as long term investments should be carried in the financial statements at cost. However, provision for diminution shall be made to recognise a decline, other than temporary, in the value of the investments, such reduction being determined and made for each investment individually. Para 17 of AS 13 'Accounting for Investments' states that indicators of the value of an investment are obtained by reference to its market value, the investee's assets and results and the expected cash flows from the investment. On these bases, the facts of the given case clearly suggest that the provision for diminution should be made to reduce the carrying amount of long term investment to Rs. 2 lacs in the financial statements for the year ended 31st March, 2009.

Answer 14. (b)

Current investment is an investment that is by its nature readily realisable and is intended to be held for not more than one year from the date on which such investment is made.

As per AS 13 “Accounting for Investments”, the Current investment should be carried in the financial statements at lower of cost and fair value determined either on an individual investment basis or by category of investments but not on an over all basis.

For current investments, any reduction to fair value and any reversal of such reductions are included in the Profit & Loss statement. It is essential to disclose in the financial statements the accounting policies for the determination of carrying amount of investments and any income from current investment. Disclosures of profits and losses on disposal of current investment and changes in carrying amount of such investments are also necessary.

Q. 15. Write short Note on :

i) P/E ratio

ii) Yield ratio

iii) Market value/book value of shares.

Answer 15. (i)

P/E ratio indicates the pay back period to the investors or prospective investors. The P/E ratio can be interpreted on a comparison with the industry P/E. A low P/E in comparison to the Industry can indicate that there are prospects for growth in share price and hence could be an indicator to buy/hold the shares. A high P/E ratio in comparison to the Industry can be an indicator to sell the shares.

$$\text{Price-Earnings Ratio (P/E Ratio)} = \frac{\text{Average Share Price}}{\text{EPS}}$$

(Sometimes it is also calculated with reference to closing share price)

$$\text{P/E Ratio} = \frac{\text{Closing Share Price}}{\text{EPS}}$$

Answer 15. (ii)

Yield ratio indicates return on investment; this may be on average investment or closing investment. Dividend (%) indicates return on paid up value of shares. But yield (%) is the indicator of true return in which share capital is taken at its market value. Symbolically,

$$\text{Yield} = \frac{\text{Dividend}}{\text{Average Share Price}} \times 100$$

$$\text{or} \quad \frac{\text{Dividend}}{\text{Closing Share Price}} \times 100$$

Answer 15. (iii)

Market value/book value of shares ratio indicates market response of the shareholders’ investment. Undoubtedly, higher the ratio, better is the shareholders’ position in terms of return and capital gains. Symbolically,

$$\frac{\text{Market Value per share}}{\text{Book Value per share}} = \frac{\text{Average Share Price}}{\text{Net Worth/No. of Equity Shares}}$$

$$\text{or} \quad \frac{\text{Closing Share Price}}{\text{Net Worth/No. of Equity Share}}$$

Q. 16. The Capital Structure of M/s XYZ Ltd., on 31st March, 2003 was as follows :

		Rs.
Equity Capital	**18,000 Shares of Rs. 100 each**	**18,00,000**
12% Preference Capital	**5,000 Shares of Rs. 100 each**	**5,00,000**
12% Secured Debentures		**5,00,000**
Reserves		**5,00,000**
Profit earned before Interest and Taxes during the year		**7,20,000**
Tax Rate (assumed)		**40%**

Generally the return on equity shares of this type of Industry is 15%.

Subject to :

(a) The profit after tax covers Fixed Interest and Fixed Dividends at least 4 times.

(b) The Debt Equity ratio is at least 2;

(c) Yield on shares is calculated at 60% of distributed profits and 10% of undistributed profits;

The Company has been paying regularly an Equity dividend of 15%.

The risk premium for Dividends is generally assumed at 1%.

Find out the value of Equity shares of the Company.

Answer 16.

Calculation of profit after tax (PAT)		**Rs.**
Profit before interest & tax (PBIT)		7,20,000
Less : Debenture interest (Rs. 5,00,000 × 12/100)		60,000
Profit before tax (PBT)		6,60,000
Less : Tax @ 40%		2,64,000
Profit after tax (PAT)		3,96,000
Less : Preference dividend $\left(\text{Rs. } 5{,}00{,}000 \times \frac{12}{100}\right)$	60,000	
Equity dividend $\left(\text{Rs. } 18{,}00{,}000 \times \frac{15}{100}\right)$	2,70,000	
		3,30,000
Retained earnings (undistributed profit)		66,000

Calculation of Interest and Fixed Dividend Coverage

$$= \frac{\text{PAT} + \text{Debenture interest}}{\text{Debenture interest} + \text{Preference dividend}}$$

$$= \frac{\text{Rs. } 3{,}96{,}000 + 60{,}000}{\text{Rs. } 60{,}000 + 60{,}000}$$

$$= \frac{\text{Rs. } 4{,}56{,}000}{\text{Rs. } 1{,}20{,}000} = 3.8 \text{ times}$$

Calculation of Debt Equity Ratio

$$\text{Debt Equity Ratio} = \frac{\text{Debt (long term loans)}}{\text{Equity (shareholders' funds)}}$$

$$= \frac{\text{Debentures}}{\text{Preference share capital} + \text{Equity share capital} + \text{Reserves}}$$

$$= \frac{\text{Rs. } 5{,}00{,}000}{\text{Rs. } 5{,}00{,}000 + 18{,}00{,}000 + 5{,}00{,}000}$$

$$\text{Debt Equity Ratio} = \frac{\text{Rs. } 5{,}00{,}000}{\text{Rs. } 28{,}00{,}000} = .179$$

The ratio is less than the prescribed ratio.

Calculation of Yield on Equity Shares

Yield on equity shares is calculated at 60% of distributed profits and 10% of undistributed profits :

60% of distributed profits (60% of Rs. 2,70,000)	1,62,000
10% of undistributed profits (10% of Rs. 66,000)	6,600
	1,68,600

$$\text{Yields on equity shares} = \frac{\text{Yield on shares}}{\text{Equity share capital}} \times 100$$

$$= \frac{\text{Rs. } 1{,}68{,}600}{\text{Rs. } 18{,}00{,}000} \times 100$$

$$= 9.37\%$$

Calculation of Expected Yield on Equity Shares Normal return expected	15%
Add : Risk premium for low interest and fixed dividend coverage (3.8 < 4)	1%*
Risk for debt equity ratio not required	Nil**
	16%

Value of an Equity Share

$$= \frac{\text{Actual yield}}{\text{Expected yield}} \times \text{Paid up value of a share}$$

$$= \frac{9.37}{16} \times 100 = \text{Rs. } 58.56$$

* When interest and fixed dividend coverage is lower than the prescribed norm, the riskiness of equity investors is high. They should claim additional risk premium over and above the normal rate of return. Hence, the additional risk premium of 1% has been added.

** The debt equity ratio is lower than the prescribed ratio, that means outside funds (Debts) are lower as compared to shareholders' funds. Therefore, the risk is less for equity shareholders. Therefore, no risk premium is required to be added in this case.

Q. 17. The following abridged Balance Sheet as at 31st March, 2009 pertains to GLC Ltd.

Liabilities	Rs. in lakhs	Assets	Rs. in lakhs
Share Capital :		Goodwill, at cost	420
180 lakh Equity shares of Rs. 10 each, fully paid up	1,800	Other Fixed Assets Current Assets	11,166 2,910
90 lakh Equity shares of Rs. 10 each, Rs. 8 paid up	720	Loans and Advances Miscellaneous Expenditure	933 171
150 lakh Equity shares of Rs. 5 each, fully paid-up	750		
Reserves and Surplus	5,628		
Secured Loans	4,500		
Current Liabilities	1,242		
Provisions	960		
	15,600		15,600

You are required to calculate the following for each one of the three categories of equity shares appearing in the above mentioned Balance Sheet :

(i) Intrinsic value on the basis of book values of Assets and Liabilities including goodwill;

(ii) Value per share on the basis of dividend yield.
Normal rate of dividend in the concerned industry is 15%, whereas GLC Ltd. has been paying 20% dividend for the last four years and is expected to maintain it in the next few years; and

(iii) Value per share on the basis of EPS.

For the year ended 31st March, 2005 the company has earned Rs. 1,371 lakh as profit after tax, which can be considered to be normal for the company. Average EPS for a fully paid share of Rs. 10 of a Company in the same industry is Rs. 2.

Answer 17.

(i) Intrinsic value on the basis of book values	**Rs. in lakhs**	**Rs. in lakhs**
Goodwill		420
Other Fixed Assets		11,166
Current Assets		2,910
Loans and Advances		933
		15,429
Less : Secured loans	4,500	
Current liabilities	1,242	
Provisions	960	6,702
		8,727
Add : Notional call on 90 lakhs equity shares @ Rs. 2 per share		180
		8,907

Equivalent number of equity shares of Rs. 10 each.

	Rs. in lakhs
Fully paid shares of Rs. 10 each	180
Partly-paid shares after notional call	90
Fully paid shares of Rs. 5 each, $\left[\dfrac{\text{Rs. 150 lakhs}}{\text{Rs. 10}} \times \text{Rs. 5}\right]$	75
	345

Value per equivalent share of Rs. 10 each $= \text{Rs.} \dfrac{8{,}907 \text{ lakhs}}{345 \text{ lakhs}} = \text{Rs. } 25.82$

Hence, intrinsic values of each equity share are as follows :

Value of fully paid share of Rs. 10 = Rs. 25.82 per equity share.

Value of share of Rs. 10, Rs. 8 paid-up = Rs. 25.82 – Rs. 2 = Rs. 23.82 per equity share.

Value of fully paid share of Rs. 5 $= \dfrac{\text{Rs. } 25.82}{2} = \text{Rs. } 12.91$ per equity share.

(ii) Valuation on dividend yield basis :

Value of fully paid share of Rs. 10 = $\dfrac{20}{15}$ × Rs. 10 = Rs. 13.33

Value of share of Rs. 10, Rs. 8 paid-up = $\dfrac{20}{15}$ × Rs. 8 = Rs. 10.67

Value of fully paid share of Rs. 5 = $\dfrac{20}{15}$ × Rs. 5 = Rs. 6.67

(iii) Valuation on the basis of EPS :

Profit after tax = Rs. 1,371 lakhs

Total share capital = Rs. (1,800 + 720 + 750) lakhs = Rs. 3,270 lakhs

Earning per rupee of share capital $= \text{Rs.} \dfrac{1{,}371 \text{ lakhs}}{3{,}270 \text{ lakhs}} = \text{Re. } 0.419$

Earning per fully paid share of Rs. 10 = Re. 0.419 × 10 = Rs. 4.19

Earning per share of Rs. 10 each, Rs. 8 paid-up = Re. 0.419 × 8 = Rs. 3.35

Earning per share of Rs. 5, fully paid-up = Re. 0.419 × 5 = Rs. 2.10

Value of fully paid share of Rs. 10 = $\text{Rs.} \dfrac{4.19}{2} \times 10$ = Rs. 20.95

Value of share of Rs. 10, Rs. 8 paid-up = $\text{Rs.} \dfrac{3.35}{2} \times 10$ = Rs. 16.75

Value of fully paid share of Rs. 5 = $\text{Rs.} \dfrac{2.10}{2} \times 10$ = Rs. 10.50

Q. 18. Briefly discuss methods of valuation of intangibles :

Answer 18.

There are four methodologies for valuation of intangibles –Discounted cash flow, Relief from royalty, Comparable(Guideline) transactions, and Avoided cost. The first two are income approach and rest two are market and asset-replacement approach respectively.

- **Discounted cash flow method :** Under this methodology, the value of an asset reflects the present value of projected earnings that will be generated by the asset after taking into account the revenues and expenses of the asset, the relative risk of the asset, the contribution of other assets, and a discount rate that reflects the time value of invested capital.
- **Relief-from-royalty :** Under this method the value of an asset is equal to all future royalties that would have to be paid for the right to use the asset if it were not acquired. A royalty rate is selected based on the importance of the asset, effectiveness of constraints imposed by competing assets, ability of competitors to produce similar assets, and market licensing rates for similar assets. The royalty rate is applied to expected revenues generated or associated with the asset. The hypothetical royalties are then discounted to their present value.
- **Comparable (Guideline) Transactions :** A comparable transaction approach is typically employed to value marketing related intangible assets. The value of an asset is based on actual prices paid for assets with functional or technical attributes similar to the subject asset. Using this data, relevant market multiples or ratios of the total purchase price paid are developed and applied to the subject asset.
- **Avoided cost :** Under this method, the value of an asset is based on calculating the cost avoided by the acquiring company when obtaining pre-existing, fully functional asset rather than incurring costs to build or assemble the asset. The savings realized may include actual and opportunity costs associated with avoided productivity losses.

Q. 19. (a) A company with a turnover of Rs. 250 crores and an annual advertising budget of Rs. 2 crore had taken up the marketing of a new product. It was estimated that the company would have a turnover of Rs. 25 crores from the new product. The company had debited to its Profit and Loss account the total expenditure of Rs. 2 crore incurred on extensive special initial advertisement campaign for the new product.
Is the procedure adopted by the company correct?

(b) A Pharma Company spent Rs. 33 lakhs during the accounting year ended 31st March, 2009on a research project to develop a life saving drug. Experts are of the view that it may take four years to establish whether the drug will be effective or not and even if found effective it may take two to three more years to produce the medicine, which can be marketed. The company wants to treat the expenditure as deferred revenue expenditure.

Answer 19. (a)

According to paras 55 and 56 of AS 26 'Intangible Assets', "expenditure on an intangible item should be recognised as an expense when it is incurred unless it forms part of the cost of an intangible asset".

In the given case, advertisement expenditure of Rs. 2 crores had been taken up for the marketing of a new product which may provide future economic benefits to an enterprise by having a turnover of Rs. 25 crores. Here, no intangible asset or other asset is acquired or created that can be recognised. Therefore, the accounting treatment by the company of debiting the entire advertising expenditure of Rs.2 crores to the Profit and Loss account of the year is correct.

Answer 19. (b)

As per para 41 of AS 26 'Intangible Assets', no intangible asset arising from research (or from the research phase of an internal project) should be recognized. Expenditure on research (or on the research phase of an internal project) should be recognized as an expense when it is incurred. Thus the company cannot treat the expenditure as deferred revenue expenditure. The entire amount of Rs. 33 lakhs spent on research project should be charged as an expense in the year ended 31st March, 2009.

Q. 20. XYZ Ltd. has an asset, which is carried in the Balance Sheet on 31.3.2005 at Rs. 500 lakhs. As at that date the value in use is Rs. 400 lakhs and the net selling price is Rs. 375 lakhs.

From the above data:

(i) Calculate impairment loss.

(ii) Prepare journal entries for adjustment of impairment loss.

(iii) Show, how impairment loss will be shown in the Balance Sheet.

Answer 20.

(i) Recoverable amount is higher of value in use Rs. 400 lakhs and net selling price Rs. 375 lakhs.

∴ Recoverable amount = Rs. 400 lakhs

Impairment loss = Carried Amount – Recoverable amount

= Rs. 500 lakhs – Rs. 400 lakhs = Rs. 100 lakhs.

(ii) **Journal Entries**

Particulars		**Dr. Amount Rs. in lakhs**	**Cr. Amount Rs. in lakhs**
(i) Impairment loss account	Dr.	100	
To Asset			100
(Being the entry for accounting impairment loss)			
(ii) Profit and loss account	Dr.	100	
To Impairment loss			100
(Being the entry to transfer impairment loss to profit and loss account)			

(iii) **Balance Sheet of Venus Ltd. as on 31.3.2005**

	Rs. in lakhs
Asset less depreciation	500
Less: Impairment loss	100
	400

Q. 21. The Balance Sheet of DST Ltd. as on 31st March, 2007 is as under :

(All figures are in lacs)

Liabilities		Rs.	Assets	Rs.
Equity Shares Rs. 10 each		3,000	Goodwill	744
Reserves (including provision for taxation of Rs. 300 lacs)		1,000	Premises and Land at cost	400
			Plant and Machinery	3,000
5% Debentures		2,000	Motor Vehicles (purchased on 1.10.06)	40
Secured Loans		200		
Sundry Creditors		300	Raw materials at cost	920
Profit & Loss A/c			Work-in-progress at cost	130
Balance from previous B/S	32		Finished Goods at cost	180
Profit for the year (After taxation)	1,100		Book Debts	400
		1,132	Investment (meant for replacement of Plant and Machinery)	1,600
			Cash at Bank and Cash in hand	192
			Discount on Debentures	10
			Underwriting Commission	16
		7,632		7,632

The resale value of Premises and Land is Rs. 1,200 lacs and that of Plant and Machinery is Rs. 2,400 lacs. Depreciation @ 20% is applicable to Motor Vehicles. Applicable depreciation on Premises and Land is 2%, and that on Plant and Machinery is 10%. Market value of the Investments is Rs. 1,500 lacs. 10% of book debts is bad. In a similar company the market value of equity shares of the same denomination is Rs. 25 per share and in such company dividend is consistently paid during last 5 years @ 20%. Contrary to this, DST Ltd. is having a marked upward or downward trend in the case of dividend payment.

Past 5 years' profits of the company were as under :

2001-02		Rs. 67 lacs
2002-03	(-)	Rs. 1,305 lacs (loss)
2003-04		Rs. 469 lacs
2004-05		Rs. 546 lacs
2005-06		Rs. 405 lacs

The unusual negative profitability of the company during 2002-03 was due to the lock out in the major manufacturing unit of the company which happened in the beginning of the second quarter of the year 2001-02 and continued till the last quarter of 2002-03.

Value the Goodwill of the Company on the basis of 4 years' purchase of the Super Profit. (Necessary assumption for adjustment of the Company's inconsistency in regard to the dividend payment, may be made by the examinee).

Answer 21.

1. Calculation of capital employed

Present value of assets :		**Rs. (in lacs)**
Premises and land		1,200
Plant and machinery		2,400
Motor vehicles (book value less depreciation for ½ year)		36
Raw materials		920
Work-in-progress		130
Finished goods		180
Book debts (400 × 90%)		360
Investments		1,500
Cash at bank and in hand		192
		6,918
Less: Liabilities:		
Provision for taxation	300	
5% Debentures	2,000	
Secured loans	200	
Sundry creditors	300	2,800
Total capital employed on 31.3.07		4,118

2. Profit available for shareholders for the year 2006-07

Profit for the year as per Balance Sheet		1,100
Less: Depreciation to be considered		
Premises and land	24*	
Plant & machinery	240*	
Motor vehicles	4	268
		832
Less : Bad debts		40
Profit for the year 2006-07		792

3. Average capital employed

Total capital employed	4118
Less : ½ of profit for the current year [Refer point 2]	396
Average capital employed	3722

* Depreciation on premises and land and plant and machinery have been provided on the basis of assumption that the same has not been provided for earlier.

			Rs. (in lacs)
4.	**Average profit to determine Future Maintainable Profits :**		
	Profit for the year 2006-07	792	
	Profit for the year 2005-06	405	
	Profit for the year 2004-05	546	
	Profit for the year 2003-04	469	
		2212 / 4	553

5. Calculation of General Expectation :

DST Ltd. pays Rs.2 as dividend (20%) for each share of Rs.10.

Market value of equity shares of the same denomination is Rs.25 which fetches dividend of 20%.

Therefore, share of Rs.10 (Face value of shares of DST Ltd.) is expected to fetch (20/25)×10 = 8% return.

Since DST Ltd. is not having a stable record in payment of dividend, in its case the expectation may be assumed to be slightly higher, say 10%.

6. Calculation of super profit :

	Rs. (in lacs)
Future maintainable profit [See point 4]	553
Normal profit (10% of average capital employed as computed in point 3)	372.2
Super Profit	180.8

7. Valuation of Goodwill

Goodwill at 4 years' purchase of Super Profit	723.20

Notes :

(1) It is evident from the Balance Sheet that depreciation was not charged to Profit & Loss Account.

(2) It is assumed that provision for taxation already made is sufficient.

(3) While considering past profits for determining average profit, the years 2001-02 and 2002-03 have been left out, as during these years normal business was hampered.

Q. 22. From the following information in respect of KK Ltd. compute the value of employees of the organization by using Lev and Schwartz Model.

	House Keeping Staff		Administrative Staff		Professionals	
Age	**No.**	**Average Annual Earnings (Rs.)**	**No.**	**Average Annual Earnings (Rs.)**	**No.**	**Average Annual Earnings (Rs.)**
30-39	**100**	**3,00,000**	**60**	**3,50,000**	**40**	**5,00,000**
40-49	**50**	**4,00,000**	**30**	**5,00,000**	**20**	**6,00,000**
50-59	**30**	**5,00,000**	**20**	**6,00,000**	**10**	**7,50,000**

The retirement age is 60 years. The future earnings have been discounted at 10%. For computing the total value of human factor, lowest value of each class is to be taken. Annuity Factors at 10% are as follows :

5 years	10years	15 years	20 years	25 years	30 years
3.791	6.145	7.606	8.514	9.077	9.427

Answer 22.

The value of employees have been computed as follows.

(A) Valuation in respect of House Keeping Staff :

1. Age Group 30-39 (Assuming all employees are just 30 years old)

Particulars	Computation	PV
Rs. 3,00,000 for next 10 years	3,00,000 × 6.145	18,43,500
Rs.4,00,000 from next 11-20 years	(4,00,000 × 8.514)-(4,00,000 × 6.145)	9,47,600
Rs. 5,00,000 from 21-30 years.	(5,00,000 × 9.427)- (5,00,000 × 8.514)	4,56,500
	Total	32,47,600

Age Group 40-49 years : (Assuming all employees are just 40 years old)

Particulars	Computation	PV
Rs. 4,00,000 p.a for next 10 years	4,00,000 × 6.145	24,58,000
Rs. 5,00,000 p.a from 11 to 20 years	(5,00,000 × 8.514) – (5,00,000 – 6.145)	11,84,500
	Total	36,42,500

Age Group 50-59 years : (Assuming all employees are just 50 years old)

Particulars	Computation	PV
Rs. 5,00,000 p.a for next 10 years	5,00,000 × 6.145	30,72,500
	Total	30,72,500

(B) Valuation in respect of Administrative Staff.

Age Group 30-39 (Assuming all employees are just 30 years old)

Particulars	Computation	PV
Rs. 3,50,000 for next 10 years	3,50,000 × 6.145	21,50,750
Rs. 5,00,000 from 11 to 20 years	(5,00,000 × 8.514) – (5,00,000 × 6.145)	11,84,500
Rs. 6,00,000 from 21-30 years.	(6,00,000 × 9.427) – (6,00,000 × 8.514)	5,47,800
	Total	38,83,050

Age Group 40-49 years : (Assuming all employees are just 40 years old)

Particulars	Computation	PV
Rs. 5,00,000 for next 10 years	(5,00,000 × 6.145)	30,72,500
Rs. 6,00,000 from 21-30 years.	(6,00,000 × 8.514) – (6,00,000 × 6.145)	14,21,400
	Total	44,93,900

Age Group 50-59 years: (Assuming all employees are just 50 years old)

Particulars	Computation	PV
Rs. 6,00,000 for next 10 years	6,00,000 × 6.145	36,87,000
		36,87,000

(C) Valuation in respect of Professionals :

1. Age Group 30-39 (Assuming all employees are just 30 years old)

Particulars	Computation	PV
Rs. 5,00,000	(5,00,000 × 6.145)	30,72,500
Rs.6,00,000	(6,00,000 × 8.514) – (6,00,000 × 6.145)	14,21,400
Rs.7,50,000	(7,50,000 × 9.427) – (7,50,000 × 8.514)	6,84,750
		51,78,650

Age Group 40-49 years : (Assuming all employees are just 40 years old)

Particulars	Computation	PV
Rs. 6,00,000	6,00,000 × 6.145	36,87,000
Rs. 7,50,000	7,50,000 × 8.514) – (7,50,000 × 6.145)	17,76,750
		54,63,750

Age Group 50-59 years : (Assuming all employees are just 50 years old)

Particulars	Computation	PV
Rs. 7,50,000	7,50,000 × 6.145	46,08,750
		46,08,750

(**D) Total Value of Employees :**

Age No.	House Keeping Staff No.	PV of future earnings	Administrative Staff No.	PV of future earnings	Professionals No.	PV of future earnings	Total No.	PV of future earnings
30-39	100	3247600 × 100 = 324760000	60	3883050 × 60 = 232983000	40	5178650 × 40 = 207146000	200	764889000
40-49	50	3642500 × 50 =182125000	30	4493900 × 30 =134817000	20	5463750 × 20 =109275000	100	426217000
50-59	30	3072500 × 30 =92175000	20	3687000 × 20 =73740000	10	4608750 × 10 =46087500	60	212002500
Total	180	599060000	110	441540000	70	362508500	360	**1403108500**

Q. 23. A Ltd. Leased a machinery to B Ltd. on the following terms :

	(Rs. in Lakhs)
Fair value of the machinery	**20.00**
Lease term	**5 years**
Lease Rental per annum	**5.00**
Guaranteed Residual value	**1.00**
Expected Residual value	**2.00**
Internal Rate of Return	**15%**

Depreciation is provided on straight line method @ 10% per annum. Ascertain unearned financial income and necessary entries may be passed in the books of the Lessee in the First year.

Answer 23.

Computation of Unearned Finance Income :

As per AS 19 on Leases, **unearned finance income** is the difference between (a) the **gross investment** in the lease and (b) the present value of minimum lease payments under a finance lease from the standpoint of the lessor; and any unguaranteed residual value accruing to the lessor, at the interest rate implicit in the lease.

Where :

(a) ***Gross investment*** in the lease is the aggregate of (i) minimum lease payments from the stand point of the lessor and (ii) any unguaranteed residual value accruing to the lessor.

Gross investment = Minimum lease payments + Unguaranteed residual value

= (Total lease rent + Guaranteed residual value) + Unguaranteed residual value

= [(Rs. 5,00,000 × 5 years) + Rs. 1,00,000] + Rs. 1,00,000

= Rs. 27,00,000

(b) Table showing present value of (i) Minimum lease payments (MLP) and (ii) Unguaranteed residual value (URV).

Year	MLP inclusive of URV Rs.	Internal rate of return (Discount factor 15%)	Present Value Rs.	
1	5,00,000	.8696	4,34,800	
2	5,00,000	.7561	3,78,050	
3	5,00,000	.6575	3,28,750	
4	5,00,000	.5718	2,85,900	
5	5,00,000	.4972	2,48,600	
	1,00,000 (guaranteed residual value)	.4972	49,720	
			17,25,820	(i)
	1,00,000 (unguaranteed residual value)	.4972	49,720	(ii)
		(i) + (ii)	17,75,540	(b)

Unearned Finance Income = (a) – (b)

= Rs. 27,00,000 – Rs. 17,75,540

= Rs. 9,24,460

Journal Entries in the books of B Ltd.

		Rs.	Rs.
At the inception of lease Machinery account To A Ltd.'s account (Being lease of machinery recorded at present value of MLP)	Dr.	17,25,820*	17,25,820*
At the end of the first year of lease Finance charges account (Refer Working Note) To A Ltd.'s account (Being the finance charges for first year due)	Dr.	2,58,873	2,58,873
A Ltd.'s account To Bank account (Being the lease rent paid to the lessor which includes outstanding liability of Rs. 2,41,127 and finance charge of Rs. 2,58,873)	Dr.	5,00,000	5,00,000
Depreciation account To Machinery account (Being the depreciation provided @ 10% p.a. on straight line method)	Dr.	1,72,582	1,72,582
Profit and loss account To Depreciation account To Finance charges account (Being the depreciation and finance charges transferred to profit and loss account)	Dr.	4,31,455	1,72,582 2,58,873

Working Note :

Table showing apportionment of lease payments by B Ltd. between the finance charges and the reduction of outstanding liability.

Year	Outstanding liability (opening balance) Rs.	Lease rent Rs.	Finance charge Rs.	Reduction in outstanding liability Rs.	Outstanding liability (closing balance) Rs.
1	17,25,820	5,00,000	2,58,873	2,41,127	14,84,693
2	14,84,693	5,00,000	2,22,704	2,77,296	12,07,397
3	12,07,397	5,00,000	1,81,110	3,18,890	8,88,507
4	8,88,507	5,00,000	1,33,276	3,66,724	5,21,783
5	5,21,783	5,00,000	78,267	5,21,783	1,00,050**
			8,74,230	17,25,820	

* As per para 11 of AS 19, the lessee should recognise the lease as an asset and a liability at an amount equal to the fair value of the leased asset at the inception of lease. However, if the fair value of the leased asset exceeds the present value of minimum lease payments from the standpoint of lessee, the amount recorded should be the present value of these minimum lease payments. Therefore, in this case, as the fair value of Rs. 20,00,000 is more than the present value amounting Rs. 17,25,820, the machinery has been recorded at Rs. 17,25,820 in the books of B Ltd. (the lessee) at the inception of the lease. According to para 13 of the standard, at the inception of the lease, the asset and liability for the future lease payments are recognised in the balance sheet at the same amounts.

** The difference between this figure and guaranteed residual value (Rs. 1,00,000) is due to approximation in computing the interest rate implicit in the lease.

Q. 24. (a) The company received an actuarial valuation for the first time for its pension scheme which revealed a surplus of Rs. 6 lakhs. It wants to spread the same over the next 2 years by reducing the annual contribution to Rs. 2 lakhs instead of Rs. 5 lakhs. The average remaining life of the employees is estimated to be 6 years.

(b) Leave encashment benefit is accounted for as per "Pay-as-you-go" method.

Answer 24. (a)

As per AS 15 'Accounting for Retirement Benefits in the Financial Statements of Employers', the surplus amount of Rs. 6 lakhs can be either credited to the profit and loss account of the current year or, alternatively, spread over a period not more than the expected remaining life of the participating employees i.e. 6 years.

This change relating to actuarial valuation for its pension scheme should be treated as a change in an accounting policy and disclosed in accordance with AS 5 (Revised).

The financial statements should disclose : (a) the method for determination of these retirement benefit costs; (b) whether the actuarial valuation was made at the end of the period or at an earlier date (also specify date); and (iii) the method by which the accrual for the period has been determined (if the same is not based on the report of the actuary).

Note : According to para 92 of AS 15 (Revised 2005) 'Employee Benefits', actuarial gains and losses should be recognized immediately in the statement of profit and loss as income or expense. Therefore, surplus amount of Rs. 6 lakhs is required to be credited to the profit and loss statement of the current year.

Answer 24. (b)

As per para 12 of AS 15 on 'Accounting for Retirement Benefits in the Financial Statements of Employers', the cost of retirement benefits to an employer results from receiving services from the employees who are entitled to receive such benefits. Consequently, the cost of retirement benefits is accounted for in the period during which these services are rendered. Accounting for retirement benefit cost only when employees retire or receive benefits payments (i.e. as per pay as you go method) does not achieve the objective of allocation of those costs to the periods in which the services were rendered. Hence, the treatment of leave encashment benefit by the management is not in consonance with AS 15.

Note : AS 15 (revised 2005) covers the leave encashment benefits under the category of short-term employee benefits. Accumulating short-term compensated absences (i.e. earned leaves) are those that are carried forward and can be used for future periods if the current period's entitlement is not used in full [para 13 of AS 15(Revised)]. Earned leaves which are encashable on retirement or resignation are vesting (which entitle employees to receive cash payment for unused entitlements on leaving the enterprise) accumulating compensated absences. 'An enterprise should measure the expected cost of accumulating compensated absences as the additional amount that the enterprise expects to pay as a result of the unused entitlement that has accumulated at the balance sheet date'. [Para 14 of AS 15 (Revised)].

Q. 25. A Ltd. acquired 25% of shares in B Ltd. as on 31.3.2002 for Rs. 3 lakhs. The Balance Sheet of B Ltd. as on 31.3.2002 is given below :

	Rs.
Share Capital	**5,00,000**
Reserves and Surplus	**5,00,000**
	10,00,000
Fixed Assets	**5,00,000**
Investments	**2,00,000**
Current Assets	**3,00,000**
	10,00,000

During the year ended 31.3.2003 the following are the additional information available :

(i) A Ltd. received dividend from B Ltd., for the year ended 31.3.2002 at 40% from the Reserves.

(ii) B Ltd., made a profit after tax of Rs. 7 lakhs for the year ended 31.3.2003.

(iii) B Ltd., declared a dividend @ 50% for the year ended 31.3.2003 on 30.4.2003.

A Ltd. is preparing Consolidated Financial Statements in accordance with AS – 21 for its various subsidiaries.

Calculate :

(i) Goodwill if any on acquisition of B Ltd.'s shares.

(ii) How A Ltd., will reflect the value of investment in B Ltd., in the Consolidated Financial Statements?

(iii) How the dividend received from B Ltd. will be shown in the Consolidated Financial Statements?

Answer 25.

In terms of AS 23 B Ltd. will be considered as an associate company of A Ltd. as shares acquired represent to more than 20%.

(i) Calculation of Goodwill

	Rs. in lacs
Cost of investment	3.00
Less : Share in the value of Equity of B.Ltd. as at the date of investment	2.50
[25% of Rs.10 lakhs (Rs. 5 lakhs + Rs. 5 lakhs)]	
Goodwill	0.50

(ii) A Ltd.

Consolidated Profit and Loss Account for the year ended 31st March, 2003

Rs. in lacs

	By Share of profits in B Ltd.		1.75
	By Dividend received from B Ltd.	0.50	
	Transfer to investment A/c	0.50	Nil

(iii) A Ltd.

Consolidated Balance Sheet as on 31.3.2003

Rs. in lacs

	Investment in B Ltd.		
	Share in B Ltd.'s Equity	2.50	
	Less : Dividend received	0.50	
		2.00	
	Share of Profit for year 2002 – 2003	1.75	
		3.75	
	Add : Goodwill	0.50	4.25

Working Notes :

1. Dividend received from B Ltd. amounting to Rs. 0.50 lakhs will be reduced from investment value in the books of A Ltd. However goodwill will not change.

2. B Ltd. made a profit of Rs. 7 lakhs for the year ended 31st March, 2003. A Ltd.'s share in the profits of Rs. 7 lakhs is Rs. 1.75 lakhs. Investment in B Ltd. will be increased by Rs. 1.75 lakhs and consolidated profit and loss account of A Ltd. will be credited with Rs. 1.75 lakhs in the consolidated financial statement of A Ltd.

3. Dividend declared on 30th April, 2003 will not be recognised in the consolidated financial statements of A Ltd.

Q. 26. In each of the questions given below, one out of four is correct. Indicate the correct answer.

1. **Which of the following words define 'value' most correctly?**
   - **a) Cost**
   - **b) Price**
   - **c) Worth**
   - **d) Utility.**

2. **Relative valuation is also known as :**
   - **a) Income approach**
   - **b) Market approach**
   - **c) Asset based approach**
   - **d) Profit based approach**

3. **Intangible assets are treated as :**
   - **a) Current Assets.**
   - **b) Fixed Assets.**
   - **c) Fictitious Assets.**
   - **d) Floating Assets.**

4. **The quoted price of a corporate bond of face value Rs.100 is Rs.95.50.The par value of the holding is Rs.10,000. The price is**
   - **a) Rs. 9550**
   - **b) Rs.9500**
   - **c) Rs.9050**
   - **d) Rs.9055**

5. **Which of the following is a valid reason for merger?**
   - **a) Lowering financing costs.**
   - **b) Increasing earnings per share.**
   - **c) Diversifying leading to increase in value**
   - **d) Taking advantage of economies of scale.**

6. What is a security?

a) A negotiable instrument.

b) Instrument representing financial value.

c) Fungible instrument.

d) All of the above.

7. FCFF at the end of last year of explicit forecast period is Rs. 10 lacs. If cost of capital is 15% and steady growth rate is 5%, the terminal value of the firm is :

a) 100 lacs

b) 105 lacs

c) 10.5 lacs

d) 50 lacs

8. The following approach states that value of a firm is unaffected by its dividend policy.

a) CAPM approach.

b) Modigliani-Miller approach.

c) Walter's Valuation model

d) None of the above.

9. Two stage discount model is based upon two clearly delineated growth stages :

a) High and low growth

b) High and stable growth

c) Low and stable growth

d) High and high growth.

10. PVGO is :

a) Net present value of a firm's future investments.

b) Net present value of a firm's past investments.

c) Net future value of present investments.

d) Net future value of past investments.

11. Leaser can claim tax benefits of the leased asset in case of :

a) Financial lease

b) Operating lease

c) In both cases.

d) In none of the cases.

12. Which of the following characteristics is typical in real estate valuation?

a) No two properties are identical.

b) All properties differ from each other in their location.

c) The terminal value of an asset may get depreciated in future.

d) All of the above.

13. Which of the following best describes free cash flow?

a) Amount of cash flow available for distribution to all investors after necessary investments in operating capital have been made.

b) Amount of cash flow available for distribution to shareholders after necessary investments in operating capital have been made.

c) Net change in cash account on the balance sheet.

d) Net income plus depreciation.

14. Following is a 'trustmark' a promise and authencity that clients can rely on :

a) Trademark

b) Goodwill

c) Brand name

d) Logo

15. Estimated fair value of an asset is based on :

a) Current operating cash flows.

b) Discounted operating cash flows.

c) Future operating cash flows.

d) Past operating cash flows.

Answer 26.

1. (c) Worth
2. (b) Market approach
3. (b) Fixed Assets.
4. (a) Rs. 9550
5. (d) Taking advantage of economics of scale.
6. (d) All of the above.
7. (b) 105 lacs [(10×1.05)/(0.15-0.05)]
8. (b) Modigliani-Miller approach
9. (b) High and stable growth
10. (a) Net present value of a firm's future investments
11. (b) Operating lease

12. (d) All of the above
13. (a) Amount of cash flow available for distribution to all investors after necessary investments in operating capital have been made.
14. (c) Brand name
15. (b) Discounted operating cash flows

Q. 27. Write short notes on :

(a) Equity Carve- Outs (ECO)s.

(b) Tracking stocks.

(c) Repurchase Agreement. (REPO)

Answer 27. (a)

In an equity carve-out (ECO) a firm separates out assets or a division, and creates shares with claim on assets. The shares are then sold to public. In a sense an ECO is the equivalent of an initial public offering of shares in the unit being carved out of parent company . In general , the parent company retains control of carved-out units though some equity carved-outs are followed by spin –offs. A firm is much more likely to use an equity carved-out for a division that has high growth opportunities and significant investment needs. So the initial market reaction to ECOs is seen to be positive.

Answer 27. (b)

A number of companies have created shares in divisions or subsidiaries that track the performance of just these units. These shares are called tracking stocks. The firm may receive cash from issuing tracking stock but the transaction can also be cash-free. The parent company usually retains complete control over the units. Over time, the stock holders in the parent company and in the carved unit may face a conflict of interest between them.

Answer 27. (c)

A REPO is the sale of a security with an agreement that the security will be bought back at a specified price at the end of agreement period. The seller of the security in the agreement raises funds, whereas the buyer earns interest from the arrangement. From the buyer’s prospective this is called a reverse repurchase agreement . Investors in repurchase agreement are usually money market funds and corporations with excess cash to invest for short period. Usually , investor earn higher interest rate than they would from treasury securities.

Q. 28. Brand or real estate valuation.

(a) How would you value real estate?

(b) What is the methodology of brand valuation?

Answer 28. (a)

For evaluation of a real estate, one can use the cash flow technique. In order to use the Discounted cash flow technique the valuer should consider cash inflows like rent, reimbursement of rates and utility expenses, terminal value as well as cash outflows like property taxes, insurance, repairs and maintenance, advertising and utility expenses. Other simpler methods like Standardised Value Measures (e.g price per square metre) and Comparable Asset Values (gross income multiplier) are also used .

It should be noted that the CAPM(Capital Asset Pricing Model) and the APM(Arbitrage Pricing Model) cannot be used easily in valuing a real estate because of some inherent features in real estates, e.g. lack of regular trading in real estates, dissimilar nature of any two real estates, terminal value often differing between two real estates etc.

Answer 28. (b)

Brand valuation methodology is comprised of four elements :

(i) **Financial analysis :** To identify business earnings and earnings from intangibles for each of the distinct segments being assessed.

(ii) **X Market Analysis :** To measure the role that a brand plays in driving demand for services in the markets in which it operates and hence to determine what proportion of earnings from intangibles are attributable to the brand. This is measured by an indicator referred to as Role of Branding Index.

(iii) **Brand Analysis :** To assess the competitive strengths and weaknesses of the brand and hence the security of future earnings expected from the brand. This is measured by an indicator referred to as Brand Strength Score.

(iv) **Legal Analysis :** To establish that the brand is a true piece of property.

There are various methods including models like Inter Brand Model that deal with a number of factors including penetration, effectiveness, recall, international presence etc.

In ultimate analysis, the value of a brand depends on what difference it makes to capturing minds of customers and enabling differentiation of the products and making an impact on markets in terms of visibility, mind bending and effect on sales and profit/earnings. This in the ultimate analysis will be a true test of the strength of a brand vis-à-vis competing brands and products. The valuation technique thus involves assessing these and determining a numerical value based on a brand strength index multiplied by the above normal earnings multiplied by appropriate capitalization factor.

Q. 29. (a) Why do investors prefer enterprise value to EBITDA multiple to other earnings multiple?

(b) In valuing a firm should you use the marginal or effective tax rate?

Answer 29. (a)

The enterprice value to EBITDA multiple relates to the total market value of the firm, net of cash to the earnings before interest, taxes, depreciation and amortization of the firm:

EV/ EBITDA= (MV of Equity – MV of debt – cash)/ EBITDA.

Unlike the earnings multiples, the enterprise value to EBITDA multiple is a firm value multiple. This multiple has acquired a number of adherents among analysts for a number of reasons :

(i) There are fewer firms with negative EBITDA than firms with negative earnings per share , thus fewer firms are lost from the analysis.

(ii) Differences in depreciation methods across different companies- some might use straight line, while others use diminishing balance and still others use accelerated depreciation – can cause differences in operating income or net income but will not affect EBITDA.

(iii) EBITDA multiple can be compared far more easily than other earnings multiples across firms with different financial leverage(the numerator is firm value and the denominator is pre- debt earnings).

For all these reasons, this multiple is particularly useful for firms in sectors like cable firms and cellular firms with cross holdings.

Answer 29. (b)

The most widely reported tax rate in financial statements is effective tax rate. It is computed as under :

(Taxes due)/(Taxable income) [figures obtained from Reported Income Statement]

The second choice on tax rate is marginal tax rate, which is the tax rate the firm faces on its last rupee of income. The reason for choice of marginal tax lies in the fact that marginal tax rate for most firms remains fairly similar, but wide differences in effective tax rates are noted across firms. In valuing a firm, if the same tax rate has to be applied to earnings of every period, the safer choice is the marginal tax rate.

Q. 30. A review of the results of the first quarter of the year by top management of SS Ltd. , a company which makes only one product, revealed the following information :

Sales (Units)	**10,000**
Loss (Rs.)	**10,000**
Fixed cost (for the year) (Rs)	**120000**
Variable Cost per unit (Rs)	**8**

The finance manager, feeling perturbed, suggested that the company should at least break-even in the second quarter by a drive for increasing sales. For this the company should introduce a better packaging which will increase its cost by Re. 0.50 per unit. The sales manager has different proposal. For the second quarter, additional sales promotion expenses can be incurred to the extent of Rs. 5000 and a profit of Rs.5000 can be aimed at during the period with increased sales. The production manager feels otherwise. To improve the demand, the selling price per unit has to be reduced by 3%. As a result the sales volume can be increased to attain a profit level of Rs. 4000 for the quarter.

You as a cost accountant are asked by the Managing Director to evaluate three proposals and calculate the additional sales volume that would be required in each case so that he can arrive at a decision.

Answer 30.

Current sales revenue = FC + VC – Loss

= Rs. 30,000 + (10,000 $\times$ 8)-10,000

= Rs.30,000+ 80,000 -10,000

= Rs. 110,000- 10,000

= Rs. 100000.

Evaluation of proposals :

(i) Finance Manager's proposal :

SP(per unit)		Rs. 10
(-) VC (per unit)		
Existing		8.00
Additional	0.50	Rs. 8.50
Contribution		Rs. 1.50.
BEP		= 30,000/1.50
		= 20,000 units.
(-) Existing sales		= 10,000 units.
Additional sales required		= 10000 units.

(ii) Sales Manager's proposal :

SP (per unit)	Rs 10
(-)VC (per unit)	Rs. 8
Contribution	Rs. 2

Total sales required to earn desired profit of Rs. 5000/-

$$= \frac{\text{(current fixed cost} + \text{additional promotional expenses} + \text{desired profit)}}{2}$$

= 20,000 units.

Therefore additional sales required = 10,000 units.

Desired sales volume to earn profits of Rs. 4000 $= \frac{\text{Rs. }(30{,}000 + 4{,}000)}{\text{Rs. }1.70}$

= 20,000 units.

Additional no. of units required to be sold to achieve desired profits of Rs. 4000 = 10,000 units.

All the three proposals imply additional sales of 10,000 units to achieve the stated objectives. The profit potential as suggested by Sales and Production Managers is present while in Finance Manager's proposal only BEP will be achieved.

It is more practical to achieve higher sales based on reduction in selling price than increasing promotional expenses as suggested by sales manager. So production manager's proposal is most viable among the three.