

CA- PCC/ IPCC

COST ACCOUNTING & FINANCIAL MANAGEMENT MAY, 2012 EXAM PAPER

An Analysis of Exam Paper

- 100% Questions from concepts taught in classroom
- Questions asked in exam are below the level taught in classroom

Question No. in Exam Paper	Subject	Similar Question no. as per CA. Raj K Agrawal Book	Page no. as per CA. Raj K Agrawal Book
1(a)	Cost	Q11	5.8
1(b)	Cost	Q5	4.13
1(c)	FM	Q5	3.10
1(d)	FM	Illustration 1	6.2
2(a)	Cost	Q3	12.4
2(b)	FM	Illustration 1	11.4
3(a)	Cost	Q10 & Q13	3.8
3(b)	FM	Illustration 4	5.8
4(a)	Cost	Q13	13.8
4(b)	FM	Q5	9.24
5(a)	Cost	Theory	7.1
5(b)	Cost	Theory	Basic
5(c)	FM	Q24	12.12
5(d)	FM	Theory	Notes
6(a)	Cost	Q2	8.2
6(b)	FM	Income Statement	Basic
7(a)	FM	Q2	12.1
7(b)	FM	Theory	Ratio
7(c)(i)	FM	Q36	12.17
7(c)(ii)	Cost	Theory	15.17
7(d)	Cost	Theory	15.18
7(e)	Cost	Theory	15.5

Q 1. Answer the following :

[4 × 5 = 20 Marks]

- (a)** AK Limited produces and sells a single product. Sales budget for calendar year 2012 by quarters is as under:

Quarters	I	II	III	IV
No. of units to be sold	18,000	22,000	25,000	27,000

The year is expected to open with an inventory of 6,000 units of finished products and close with inventory of 8,000 units. Production is customarily scheduled to provide for 70% of the current quarter's sales demand plus 30% of the following quarter demand. The budgeted selling price per unit is ₹ 40. The standard cost details for one unit of the product are as follows:

Variable Cost ₹ 34.50 per unit

Fixed Overheads 2 hours 30 minutes @ ₹ 2 per hour based on a budgeted production volume of 1,10,000 direct labour hours for the year. Fixed overheads are evenly distributed throughout the year.

You are required to:

- Prepare Quarterly production Budget for the year.
- In which quarter of the year, company expected to achieve break-even point.

Ans1(a)(i) Quarterly production Budget of AK Ltd. for the calendar year 2012.

Annual production

Quarter	I	II	III	IV	Total
Unit sold	18,000	22,000	25,000	27,000	92,000

∴ Total unit sold	92,000
Add: closing stock of finished product	<u>8,000</u>
Total	<u>1,00,000</u>
Less: Opening stock of finished product	<u>6,000</u>
Annual production	<u>94,000</u>

Quarterly production budget

Particulars	Q I	Q II	Q III	Q IV
70 % of current quarter sales	12,600	15,400	17,500	18,900
30 % of following quarter sales	6,600	7,500	8,100	7,400
Total	19,200	22,900	25,600	26,300
				WN1

WN1: Total production in first third quarter = 19,200 + 25,600 = 67,700 units

∴ IV Quarter production = 94,000 – 67,700 = 26,300

- (ii)**
- | | |
|--------------------------------------|------------------|
| Selling price p.u. | = ₹ 40 |
| Variable cost p.u. | = ₹ <u>34.50</u> |
| Contribution p.u. | = ₹ <u>5.5</u> |
| Total fixed cost = 1,10,000 hr × ₹ 2 | = ₹ 2,20,000 |

$$BEP = \frac{\text{Fixed Cost}}{\text{Contribution p.u.}} = \frac{2,20,000}{5.5} = 40,000 \text{ units}$$

Quarter	Sales (units)	Cumulative Sales
QI	18,000	18,000
QII	22,000	40,000 (BEP)
QII	25,000	65,000
QIV	27,000	92,000

∴ BEP will be achieved in Quarter II

Q1(b) A machine costing ₹ 10 lacs was purchased on 1-04-2011. The expected life of the machine is 10 years. At the end of this period its scrap value is likely to be ₹ 10,000. The total cost of all the machines including new one was ₹ 90 lacs.

The other information is given as follows:

- Working hours of the machine for the years was 4,200 including 200 non-productive hours.
- Repairs and maintenance for the new machine during the year was ₹ 5,000.
- Insurance premium was paid for all the machine ₹ 9,000.
- New machine consumes 8 units of electricity per hour, the rate per unit being ₹ 3.75.
- The new machine occupies $\frac{1}{10}$ area of the department. Rent of the department is ₹ 2,400 per month.
- Depreciation is charged on straight line basis.

Compute machine hour rate for the new machine.

Ans 1(b) Calculation of machine Hour rate

Particulars	Amount (₹)
Insurance premium ($9000 \times 10/90$)	1,000
Rent ($2,400 \times 12 \times 1/10$)	2,880
Repair & Maintenance	5,000
Depreciation	99,000
<u>$10,00,000 - 10,000$</u>	
10	
Electricity ($4,200 \times 8 \times 3.75$)	1,26,000
Total Overhead	2,33,880
Productive Machine Hour ($4200 - 200$)	4,000
Machine Hour Rate	58.47

Note : It has been assumed that electricity is consumed in non productive hours also

Q1(c) RES Ltd. is all equity financed company with a market value of ₹ 25,00,000 and cost of equity, $k_e = 21\%$. The company wants to buyback equity shares worth ₹ 5,00,000 by issuing and raising 15% perpetual debt of the same amount. Rate of tax may be taken as 30%. After the capital restructuring and applying MM Model (with taxes), you are required to calculate:

- Market value of RES Ltd.
- Cost of Equity k_e
- Weighted average cost of capital and comment on it.

Ans 1(c)

- Value of levered Co. = Value of All Equity + Debt $\times$ Tax Rate
 $= 25 \text{ lac} + 5 \text{ lac} \times 30$
 $= 26.5 \text{ lac}$

$$\begin{aligned}
 \text{(ii) Value of All equity Co.} &= \frac{\text{EBIT} (1-t)}{K_e} \\
 25,00,000 &= \frac{\text{EBIT} (1-.30)}{.21} \\
 \text{EBIT} &= 7,50,000
 \end{aligned}$$

Income Statement

EBIT	7,50,000
— Interest 5 lac × 15%	<u>75,000</u>
EBT	6,75,000
— Tax @ 30%	<u>2,02,500</u>
Earning for equity	<u>4,72,500</u>

Value of Co. 26,50,000	
Debt	Equity (B/f)
5,00,000	21,50,000

$$K_e = \frac{\text{Earning for Equity}}{\text{Value of Equity}} = \frac{4,72,500}{21,50,000} = 21.976\%$$

$$\text{(iii) WACC} = W_e K_e + W_d K_d$$

$$\begin{aligned}
 &= \frac{21,50,000}{26,50,000} \times 21.976 + \frac{5,00,000}{26,50,000} \times 15(1-.30) \\
 &= 19.81\%
 \end{aligned}$$

Debt is a cheaper source of finance & it results in decreasing cost of capital. But the expectation of shareholder rises because they assume greater risk with a company having more debt. The extent of decrease in the cost of capital due to involvement of debt is compensated by increased cost of equity & thus the overall cost of capital remains same as before. Modigliani Miller says cost of capital & value of business is not effected by the change in capital structure. But incase there is tax, the value of company having debt in its capital structure will be slightly higher because of tax saving on interest cost of debt.

Q1(d) A company is presently having credit sales of ₹ 12 lakh. The existing credit terms are 1/10, net 45 days average collection period is 30 days. The current bad debts loss is 1.5%. in order to accelerate the collection process further as also to increase sales, the company is contemplating liberalization of its existing credit terms to 2/10, net 45 days. It is expected that sales are likely in increase 1/3 of existing sales, bad debts increase to 2% of sales and average collection period to decline to 20 days. The contribution to sales ratio of the company is 22% and opportunity cost of investment in term of sales revenue are expected to avail cash discount under existing and liberalization scheme respectively. The tax rate is 30%. Should the company change its credit terms? (Assume 360 days in a year).

Ans. 1(d) Evaluation of discount policy

<u>Particulars</u>		<u>Amount in Rs.</u>
(A) Contribution on additional sales	$= 12 \text{ Lac} \times \frac{1}{3} \times 22\% =$	88,000
(B) <u>Saving of interest</u>		

$$\text{Under existing situation } 12\text{L} \times 78\% \times \frac{30}{360} = 78,000$$

$$\text{After change in policy } 16\text{L} \times 78\% \times \frac{20}{260} = 69,333$$

$$\text{Decrease in COD} \quad \underline{8,667}$$

$$\text{Saving of Interest @ 15\%} \quad 1,300$$

(C) B. Debts

$$\text{Current} \quad 12\text{ Lac} \times 1.50\% = 18,000$$

$$\text{After} \quad 16\text{ Lac} \times 2\% = \underline{32,000} \quad (14,000)$$

(D) Cash Discount

$$\text{Current} \quad 12\text{L} \times 50\% \times 1\% = 6,000$$

$$\text{After} \quad 16\text{L} \times 80\% \times 2\% = 25,600 \quad \underline{(19,600)}$$

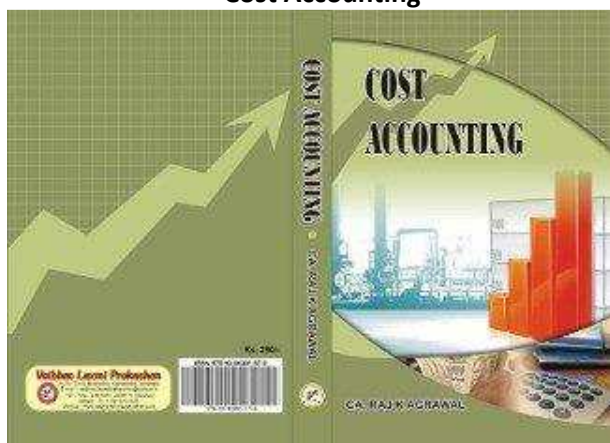
$$\text{Net Benefit before tax} \quad 55,700$$

$$\text{Less: Income Tax @ 30\%} \quad \underline{16,710}$$

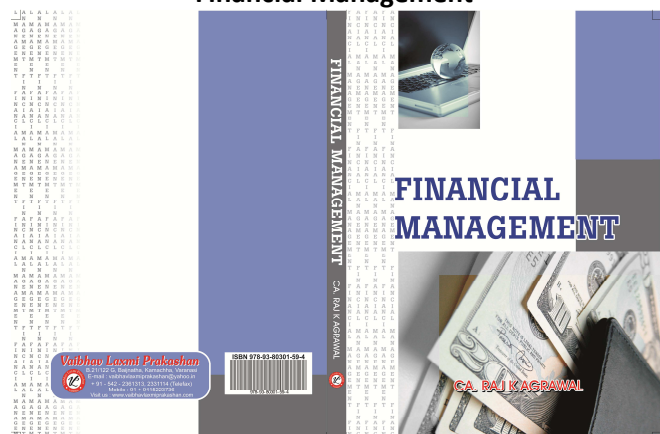
$$\text{Net Benefit} \quad \underline{38,990}$$

Note: Saving of Interest is calculated on cost of debtors

Cost Accounting



Financial Management



Q2(a) A contractor commenced a contract on 1-7-2011. The costing records concerning the said contract reveal the following information as on 31-3-2012: [8 Marks]

	Amount ₹
Material sent to site	7,74,300
Labour paid	10,79,000
Labour outstanding as on 31-3-2012	1,02,500
Salary to Engineer	20,500 per month
Cost of plant sent to site (1-7-2011)	7,71,000
Salary to Supervisor (3/4 time devoted to contract)	9,000 per month
Administration & other expenses	4,60,600
Prepaid Administration expenses	10,000
Material in hand at site as on 31-3-2012	75,800

Plant used for the contract has an estimated life of 7 years with residual value at the end of life ₹ 50,000. Some of material costing ₹ 45,00,000. On 31-3-2012 two third of the contract was completed. The architect issued certificate covering 50% of the contract price and contract price and contractor has been paid ₹ 20,00,000 on account. Depreciation on plant is charged on straight line basis. Prepare Contract Account.

Ans.2(a)

Contract A/c
For the period 1-7-2011 to 31-3-2012

Particulars	Amount ₹	Particulars	Amount ₹
To Material sent to site	7,74,300	By Bank- Sale of Material	10,000
To Labour paid 10,79,000			
Add: outstanding labour 1,02,500	11,81,500	By P & L – loss on sale of material	3,500
To Salary to engineer (20,500 × 9)	1,84,500	By Material in hand	75,800
To Salary to supervisor (9,000×9×3/4)	60,750	By WIP	
To Admin & other Exp. 4,60,600		Work certified 22,50,000	
Less: Prepaid Exp. 10,000	4,50,600	(45,00,000 × 50 %)	
To Depreciation on plant		Work uncertified 6,59,900	29,09,900
$\frac{7,71,000 - 50,000}{7} \times \frac{9}{12}$	77,250		
To Notional profit c/d	2,70,300		
	29,99,200		29,99,200
To P & L A/c	1,60,178	By Notional profit b/d	2,70,300
To Reserve	1,10,122		
	2,70,300		2,70,300

Working note

- (i) Total cost up to date
 $7,74,300 + 11,81,500 + 1,84,500 + 60,750 + 4,50,600 + 77,250 - 10,000 - 3,500 - 75,800 = 26,39,600$
- (ii) Total Proportion of work uncertified = $\frac{2}{3} - \frac{1}{2} = \frac{4-3}{6} = \frac{1}{6}$

$$\text{Cost of work uncertified} = 26,39,600 \times \frac{3}{2} \times \frac{1}{6} = 6,59,900$$

Working Note

$$\begin{aligned} \text{Profit transferred to P\&L} &= \frac{2}{3} \times \text{Notional Profit} \times \frac{\text{Cash Received}}{\text{Work certified}} \\ &= \frac{2}{3} \times 2,70,300 \times \frac{20,00,000}{22,50,000} = 1,60,178 \end{aligned}$$

Q2(b) The Balance Sheet of X Ltd. as on 31-3-2011 and 31-3-2012 are as under:

liabilities	2011	2012	Assets	2011	2012
Equity Share capital (₹ 10 each)	18,00,000	22,00,000	Fixed Assets (Including machine)	20,50,000	18,75,000
General Reserve	7,50,000	6,00,000	Stock	7,10,000	8,95,000
Security premium	50,000	45,000	Debtors	7,25,000	9,80,000
Profit & Loss A/c	4,50,000	5,30,000	Cash balance	1,25,000	1,80,000
7% Debentures	3,00,000	2,00,000	Preliminary Expense	35,000	25,000
Creditors	1,50,000	2,15,000			
Provision for tax	1,45,000	1,65,000			
	36,45,000	39,55,000		36,45,000	39,55,000

Additional Information:

- Depreciation charged on fixed assets during the year was ₹ 2,05,000. An old machine costing ₹ 2,00,000 (WDV ₹ 80,000) was sold for ₹ 65,000 during the year.
 - Provisions for tax made during the year for ₹ 1,78,000.
 - On 1-4-2011 company redeemed debenture of ₹ 1,00,000 at a premium of 5%
 - Company has issued fully paid bonus share of ₹ 2,00,000 by capitalization of profit.
- Prepare Cash Flow Statement.

Ans.2 (b)

X Ltd.

Cash Flow Statement for the year ended 31.03.2012

Particulars	Amount ₹	Amount ₹
(A) Cash From Operating Activities		
Net profit after Tax	80,000	
Add: Provision for tax	1,78,000	
Depreciation	2,05,000	
Loss on sale of Machine	15,000	
Interest on Debenture	14,000	
Transfer to Reserve	50,000	
Prelim. Exp. w/o	<u>10,000</u>	
Fund from operation	5,52,000	
Less: Increase in stock	1,85,000	
Less: Increase in Debtor	2,55,000	
Add: Increase in creditors	<u>65,000</u>	
	1,77,000	
Less: Tax paid	<u>1,58,000</u>	19,000
(B) Cash from Investing Activities		
Purchase of FA	(1,10,000)	
Sale of FA	<u>65,000</u>	(45,000)
(c) Cash from Financing Activities		
Interest on debenture	(14,000)	
Equity Shares Issued	2,00,000	
Redemption of Debentures	<u>(1,05,000)</u>	81,000
Net Cash Flow during the year		55,000
Opening Cash & Cash Equivalent		<u>1,25,000</u>
Closing Cash & Cash Equivalent		<u>1,80,000</u>

Working Note:

Fixed Assets A/c			
To Bal. b/d	20,50,000	By P & L (Dep.)	2,05,000
To Bank	1,10,000	To Bank	65,000
		To P & L (loss)	15,000
		By Bal. c/d	18,75,000
	21,60,000		21,60,000

Provision for Tax A/c			
To Bank	1,58,000	By Bal. b/d	1,45,000
To Bal. c/d	1,65,000	By P & L	1,78,000
	3,23,000		3,23,000

Debentures A/c			
To Bank	1,00,000	By Bal. b/d	3,00,000
To Bal. c/d	2,00,000		
	3,00,000		3,00,000

Equity Share Capital A/c			
		By Bal. b/d	18,00,000
		By General Reserve	2,00,000
To Bal. c/d	22,00,000	By Bank	2,00,000
	22,00,000		22,00,000

Q3(a) The management of a company wants to formulate an incentive plan for the workers with a view to increase productivity. The following particulars have been extracted from the books of company.

Piece Wage rate ₹ 10

Weekly working hours 40

Hourly wages rate ₹ 40 (guaranteed)

Standard / normal time taken per unit 15 minutes

Actual output for a week:

Worker A 176 Pieces

Worker B 140 Pieces

Differential piece rate: 80% of piece rate when output below normal and 120% of piece rate when output above normal.

Under Halsey scheme, worker gets a bonus equal to 50% of wages of time saved.

Calculate:

- Earning of workers under Halsey's and Rowan's premium scheme.
- Earning of workers under Taylor's differential piece rate system and Emerson's efficiency plan.

Ans.3 (a)(i) Rate per unit = 10

Standard time for one unit = 15 min

Rate per Hr. = 40

Worker	Std. Time for total production	Actual Time	Time saved	Efficiency
A	$176 \times \frac{15}{60} = 44 \text{ Hrs.}$	40 Hrs.	4	$\frac{44}{40} \times 100 = 110\%$
B	$140 \times \frac{15}{60} = 35 \text{ Hrs.}$	40 Hrs.	—	$\frac{35}{40} \times 100 = 81.51\%$

Earning of Worker

Under Halsey = Time Taken × Time Rate + (50 % of time saved × Time Rate)

$$A = 40 \times 40 + 50 \% (4 \times 40) = 1,600 + 80 = 1,680$$

$$B = 40 \times 40 + 50 \% (0 \times 40) = 1,600$$

Under Rowan plan = Time Taken × Time Rate + $\frac{\text{Time Saved}}{\text{Time Allowed}} \times (\text{Time Taken} \times \text{Time Rate})$

$$A = 40 \times 40 + \frac{4}{44} (40 \times 40) = 1745.45$$

$$B = 40 \times 40 + \frac{0}{35} (40 \times 40) = 1600$$

(ii) **Taylor's plan**

Worker A efficiency is above normal thus he will be paid 120 % of piece rate

$$= 176 \times 10 \times 120 \% = ₹ 2,112$$

Worker B efficiency is below normal thus he will be paid 80 % of piece rate

$$= 140 \times 10 \times 80 \% = ₹ 1,120$$

Emersons efficiency plan

Worker A will be paid 20 + 10 = 30% bonus

$$\therefore \text{Bonus} = 40 \times 40 \times 30 \% = 480$$

$$\text{Total wages} = 40 \times 40 + 480 = 2,080$$

Worker B - As per Emersons efficiency plan when efficiency is between 66.67 % to 100 % Bonus can be given 0 to 20 %. In absence of information it has been assumed that bonus of 20 % is paid

$$\text{Worker B: Bonus} = 40 \times 40 \times 20 \% = 320$$

$$\text{Wages} = (40 \times 40) + 320 = 1,920$$

Q3(b) STN Ltd. is a ready made garment manufacturing company. Its production cycle indicates that materials are introduced in the beginning of the production phase; wages and overhead accrue evenly throughout the period of cycle. The following figures for the 12 months ending 31st December 2011 are given.

Production of shirts	54,000 units
Selling price per unit	₹ 200
Duration of the production cycle	1 month
Raw material inventory held	2 month's consumption
Finished goods stock held for	1 month

Credit allowed to debtors is 1.5 months and credit allowed by creditors is 1 month

Wages are paid in the next month following the month of accrual.

In the work-in-progress 50% of wage and overheads are supposed to be conversion costs.

The ratios of cost to sales price are – raw materials 60% direct wages 10% and overheads 20%. Cash is to be held to the extent of 40% of current liabilities and safety margin of 15% will be maintained.

Calculate amount of working capital required for the company on a cash cost basis.

Ans.3 (b) Estimation of working capital requirement

<u>Particulars</u>	<u>Amount</u>
Cash Bal. 6,30,000 × 40%	2,52,000

Stack of RM	$54,000 \times 120 \times \frac{2}{12}$	10,80,000
Stock of WIP	$54,000 \times 150 \times \frac{1}{12}$	6,75,000
Stock of FG	$54,000 \times 180 \times \frac{1}{12}$	8,10,000
Debtors	$54,000 \times 180 \times \frac{1.5}{12}$	<u>12,15,000</u>
	Current Assets	<u>40,32,000</u>
Creditors	$54,000 \times 120 \times \frac{1}{12}$	5,40,000
O/S Wages	$54,000 \times 20 \times \frac{1}{12}$	<u>90,000</u>
	Current Liabilities	<u>6,30,000</u>
	Net Working Capital	34,02,000
	Add: Safety Margin	<u>5,10,300</u>
	WC. Required	<u>39,12,300</u>

Q4(a) SJ Ltd. has furnished the following information:

Standard overhead absorption rate per unit	₹ 20
Standard rate per hour	₹ 4
Budgeted production	15,000 units
Actual production	15,560 units
Actual overheads were ₹ 2,95,000 out of which ₹ 62,500 fixed	
Actual hours	74,000

Overheads are based on the following flexible budget.

Production (units)	8,000	10,000	14,000
Total Overheads (₹)	1,80,000	2,10,000	2,70,000

You are required to calculate the following overhead variances (on hour's basis) with appropriate workings:

- Variable overhead efficiency and expenditure variance.
- Variable overhead efficiency and capacity variance.

Ans.4 (a) Actual variable OH = 2,95,000 – 62,500 = 2,32,500

Actual fixed OH = 62,500

Standard fixed OH p.u. = $\frac{\text{Change in Overhead}}{\text{Change in production}} = \frac{2,70,000 - 1,80,000}{14,000 - 8,000} = 15 \text{ p.u.}$

∴ Standard fixed OH = 2,70,000 – (14,000 × 15) = 60,000

Standard variable OH = 15,000 × 15 = 22,50,000

Actual Hours = 74,000

Standard Hours per unit = $\frac{\text{Std.OH rate p.u.}}{\text{Std.rate p.hr.}} = \frac{20}{4} = 5 \text{ per Hrs.}$

∴ Total standard Hours = (5 × 15,000) = 75,000 hrs.

Std. variable OH rate per Hour = $\frac{15}{5} = 3 \text{ per hrs.}$

(i) Data for Variable Overhead variance

Budget (15,000 unit)			Standard (15,560 units)			Actual (15,560 units)		
Hr	Rate	Amount	Hour	Rate	Amount	Hour	Rate	Amount
75,000	3	2,25,000	77,800	3	2,33,400	74,000	3.14	2,32,500

$$\text{F Overhead Eff. V} = (\text{SHR.} - \text{AHR}) \text{SR} = (77,800 - 74,000)3 = 11,400 \text{ (F)}$$

$$\text{F Overhead Exp. V} = (\text{SR} - \text{AR}) \text{AHR} = (3 - 3.14) 74,000 = 10,500 \text{ (A)}$$

(ii) Data for fixed overhead cost variance

<u>Budget hrs for budget production</u>	<u>RR</u>	<u>Budget Overhead</u>	
75,000	.80	60,000	
<u>Actual Hrs For Actual Production</u>			<u>Actual Overhead</u>
74,000			62,500
<u>Standard hours</u>		<u>Recovered Overhead</u>	
77,800		62,240	

$$\text{Fixed overhead Efficiency variance} = (\text{Std Hr} - \text{Actual hr}) \text{Recovery Rate}$$

$$= (77,800 - 74,000) .80 = 3,040 \text{ (F)}$$

$$\text{Fixed overhead capacity variance} = (\text{Actual Hr.} - \text{Budgeted hr}) \text{Recovery Rate}$$

$$= (74,000 - 75,000) .80 = 800 \text{ (A)}$$

Q4(b) ANP Ltd. is providing the following information:

Annual cost of saving	₹ 96,000
Useful life	5 years
Salvage value	zero
Internal rate of return	15%
Profitability index	1.05
Table of discount factor:	

Discount factor	Years					
	1	2	3	4	5	Total
15%	0.870	0.756	0.658	0.572	0.497	3.353
14%	0.877	0.769	0.675	0.592	0.519	3.432
13%	0.886	0.783	0.693	0.614	0.544	3.52

You are required to calculate:

- (i) Cost of the project
- (ii) Pay back period
- (iii) Net present value of cash inflow
- (iv) Cost of capital

Ans. 4 (b) Annual Cost Saving = Annual Inflow

Annual Inflow @ IRR Rate = Outflow

$$96,000 \times 3.352 = 3,21,800$$

(i) Cost of project = Outflow = 3,21,800

$$(ii) \quad \text{Pay Back period} = \frac{\text{Cost of project}}{\text{Annual Cash Inflows}} = \frac{3,21,800}{96,000} = 3.352 \text{ yrs.}$$

$$(iii) \quad PI = \frac{\text{PV of Inflow}}{\text{Cost of project}} \therefore 1.05 = \frac{\text{PV of Inflow}}{3,21,800} \therefore \text{PV of Inflow} = 3,37,890$$

$$\text{NPV} = \text{PV of Inflow} - \text{Cost of project} = 3,37,890 - 3,21,800 = 16,090$$

$$(iv) \quad \begin{aligned} \text{Cost of capital} \\ \text{PV of Inflow} &= \text{Inflow} \times \text{PVAF at cost of capital} \\ 3,37,890 &= 96,000 \times \text{PVAF at cost of capital} \\ \text{PVAF at cost of capital} &= 3,520 \\ \therefore \text{Cost of capital} &= 13\% \end{aligned}$$

Q5(a) What is an Integrated Accounting System? State its advantages.

Ans 5(a) Integrated Accounting System

Integrated accounting system refers to the interlocking of the financial and cost accounting systems to ensure all relevant expenditure is absorbed into the cost accounts. Under this accounting system transactions are classified both according to their function and nature.

Under integrated accounting system, both Financial and Cost Accounting records are maintained in one set of books to meet the requirements of Financial Accounting and Cost Accounting purposes. In other words, we can say, that Cost Accounting is integrated into the Financial Accounting System. Integrated accounting records provide the necessary information for ascertainment of cost of each unit, batch or job or any other cost unit and simultaneously financial statements viz., Profit and Loss Account and Balance sheet can be prepared without any distortion of the Financial Accounting information. In this system transactions are recorded based on double entry bookkeeping and costs are classified on the basis of function which enables the firm in ascertainment of product cost with necessary classification. For example, the purchase of raw material is analyzed by its nature and instead of posting it to the Purchases Account as in Financial Accounts, directly posted into Stores Ledger Control Account, Work-in-progress Ledger Control Account or Overhead Account. Similarly the payment of direct wages instead of posting into Direct Wages Account, posting is directly made into Wages Control Account or Overheads Control Account.

Benefits of Integrated Accounting System

The important benefits of maintaining records on Integrated Accounting System are as follows:

- (i) In this system only one set of accounts are maintained and there will be single profit figure. The necessity of preparation of reconciliation statement does not arise.
- (ii) The maintenance of one set of accounts avoids the duplication of efforts and substantial time and expense is saved.
- (iii) There will not be any delay in getting information from the accounting records for financial and costing purposes.
- (iv) This system can be more advantageous only if operated in computerized environment and mechanized accounting.
- (v) With the integration of cost and financial accounts, centralization of accounting and information is possible and it saves both time and expense.
- (vi) The simplification of accounting procedures helps in better control of the operations.

- (vii) Costing information is generated from the books of original entry. It avoids delay in obtaining information.
- (viii) It furnish all information regarding cost of each product, job or operation ad variances will also be highlighted for effective control purpose.
- (ix) It provides all information about the profit or loss of the whole organization and financial position of the concern and help the management in better control over the operations.
- (x) This accounting system ensures the ascertainment of marginal cost, variances, abnormal loss and gains.

Q5(b) State the types of cost in the following cases:

- (i) Interest on own capital not involving any cash outflow.
- (ii) Withdrawing money from bank deposit for the purpose of purchasing new machine for expansion purpose.
- (iii) Rent paid for the factory building which is temporarily closed.
- (iv) Cost associated with the acquisition and conversion of material into finished product.

Ans.5 (b) (i) Notional Cost or implicit Cost or Opportunity Cost

- (ii) Out of pocket Cost
- (iii) Shutdown Cost
- (iv) Conversion Cost

Q5(c) Discuss factors that a venture capitalist should be considered before financing any risky project.

Ans.5 (c) Factors that a venture capitalist should consider before financing any risky project are as Follows:

(i) Level of expertise of company's management: Most of venture capitalist believes that the success of a new project is highly dependent on the quality of its management team.

They expect that entrepreneur should have a skilled team of managers. Managements also be required to show a high level of commitments to the project.

(ii) Level of expertise in production: Venture capital should ensure that entrepreneur and his team should have necessary technical ability to be able to develop and produce new product / service.

(iii) Nature of new product / service: The venture capitalist should consider whether the Development and production of new product / service should be technically feasible. They should employ experts in their respective fields to examine idea proposed by the entrepreneur.

(iv) Future prospects: Since the degree of risk involved in investing in the company is quite fairly High, venture capitalists should seek to ensure that the prospects for future profits compensate for the risk. Therefore, they should see a detailed business plan setting out the future business strategy.

(v) Competition: The venture capitalist should seek assurance that there is actually a market for a new product. Further venture capitalists should see the research carried on by the entrepreneur.

Q5(d) What is Net Operating income theory of capital structure? Explain the assumptions on which the NOI theory is based.

Ans.5 (d) Net Operating Income Approach (NOI):

According to this approach, capital structure decisions of the firm are irrelevant. Any change in the leverage will not lead to any change in the total value of the firm and the market price of shares, as the overall cost of capital is independent of the degree of leverage. As a result, the division between debt and equity is irrelevant. As per this approach, an increase in the use of debt which is apparently cheaper is offset by an increase in the equity capitalization rate. This happens because equity investors seek higher compensation as they are opposed to greater risk due to the existence of fixed return securities in the capital structure.

Assumptions under NOI Approach:

- Cost of debt is less than cost of equity
- Cost of debt and overall cost of capital is constant
- No corporate taxes

Q6(a) A product passes through two processes A and B. during the year 2011, the input to process A of basic raw material was 8,000 units @ ₹ 9 per unit. Other information for the year is as follows:

	Process A	Process B
Output units	7,500	4,800
Normal loss (% to input)	5%	10%
Scrap value per unit (₹)	2	10
Direct wages (₹)	12,000	24,000
Direct expenses (₹)	6,000	5,000
Selling price per unit (₹)	15	25

Total overheads ₹ 17,400 were recovered as percentage of direct wages.

Selling expenses were ₹ 5,000. There are not allocated to the processes. 2/3 of the output of Process A was passed on to the next process and the balance was sold. The entire output of process B was sold.

Prepare Process A and B Accounts.

Ans. 6 (a)

Process A A/c							
Particulars	Qty.	Rate	Amount	Particulars	Qty.	Rate	Amount
To Raw material	8,000	9	72,000	By Normal loss a/c	400	2.00	800
To Direct wages	-	1.5	12,000	By Abnormal loss	100	12.5	1,250
To Direct Exp.	-	0.75	6,000	By Process B	5,000	12.5	62,500
To OH	-	0.725	5,800	By Sale	2,500	15	37,500
To Costing P/L	2,500	2.5	6,250				
	8,000	-	1,02,050		8,000	-	1,02,050

Working Note

$$1. \text{ Overhead} = 17400 \times \frac{12,000}{36,000} = 5,800$$

$$2. \text{ Cost per unit} = \frac{95,800 - 800}{8,000 - 400} = 12.5$$

Process B A/c							
Particulars	Qty.	Rate	Amount	Particulars	Qty.	Rate	Amount
To Process A a/c	5,000	12.5	62,500	By Normal loss a/c	500	10	5,000
To Direct wages	-	4.8	24,000	By Sale	4,800	25	1,20,000
To Direct Exp.	-	1	5,000				
To OH	-	2.32	11,600				
To Abnormal gain	300	21.8	6,540				
To Costing P/L			15,360				
	5,300		1,25,000		2,500		1,25,000

Working Note

- Overhead $17,400 \times \frac{24,000}{36,000} = 11,600$
- Cost p.u.. = $\frac{1,03,100 - 5,000}{5,000 - 500} = 21.8$
- Costing P/L = $(21 - 21.80) 4,800 = 15,360$

Q6(b) The capital structure of JCPL Ltd. is as follows:

	₹
Equity share capital of ₹ 10 each	8,00,000
8% Preference share capital of ₹ 10 each	6,25,000
10% Debenture of ₹ 100 each	<u>4,00,000</u>
	<u>18,25,000</u>

Additional Information:

Profit after tax (tax rate 30%) ₹ 1,82,000

Operating expenses (including depreciation ₹ 90,000) being 1.50 times of EBIT

Equity share dividend paid 15%

Market price per equity share ₹ 20

Required to calculate:

- Operating and financial leverage
- Cover the preference and equity share dividends
- The earning yield and price earning ratio
- The net fund flow.

Ans. 6(b)

Income Statement

Sales	7,50,000
- VC	<u>3,60,000</u>
Contribution	3,90,000
- FC	<u>90,000</u>
EBIT	3,00,000
- Interest	<u>40,000</u>
EBT	2,60,000
- Tax	<u>78,000</u>
EAT	1,82,000
- Pref. Dividend	<u>50,000</u>
Earning for Equity	<u>1,32,000</u>

$$(i) \quad OL = \frac{\text{Contribution}}{\text{EBIT}} = \frac{3,90,000}{3,00,000} = 1.3$$

$$FL = \frac{\text{EBIT}}{\text{EBT for Equity}} = \frac{3,00,000}{1,88,571} = 1.59$$

$$\text{EBT for Equity} = \frac{\text{Earning for Equity}}{1 - \text{tax}} = \frac{1,32,000}{1 - .30} = 1,88,571$$

$$(ii) \quad \text{Preference Dividend Cover} = \frac{\text{EAT}}{\text{Pref. Div}} = \frac{1,82,000}{50,000} = 3.64$$

$$\text{Equity Dividend cover} = \frac{\text{Earning for Equity SH}}{\text{Equity Div.}} = \frac{1,32,000}{1,20,000} = 1.1$$

$$(iii) \quad \text{Earning Yield Ratio} = \frac{\text{EPS}}{\text{MP/Share}} = \frac{1.65}{20} = 8.25\%$$

$$\text{Price Earning Ratio} = \frac{\text{MP/Share}}{\text{EPS}} = \frac{20}{1.65} = 12.12$$

(iv)	Net Fund Flow	
	Net profit After Tax	1,82,000
	Add: Provision for Tax	78,000
	Add: Depreciation	90,000
	Add: Interest	<u>40,000</u>
	Net Fund Flow	<u>3,90,000</u>

Q7. Answer any four of the following

(a) "The profit maximization is not an operationally feasible criterion." Comment on it.

Ans. 7(a) The profit maximization approach is not an operationally feasible criterion because of the following limitations:

- It does not consider risk
- It does not take care of social responsibilities
- It is not suitable for non profit making organization
- It does not consider time value of money

Q7(b) Explain the important ratios that would be used in each of the following situations.

- A bank is approached by a company for a loan of ₹ 50 lakh for working capital purposes.
- A long term creditors interested in determining whether his claim is adequately secured.
- A shareholder who is examining his portfolio and who is to decide whether he should hold or sell his holding in the company.
- A finance manager interested to know effectiveness with which a firm uses its available resources.

Ans. 7(b)

- (i) Current Ratio, Quick Ratio, Stock Turnover Ratio
- (ii) Proprietary ratio, Debt – equity ratio
- (iii) Earning per share, P/E ratio, Return on equity
- (iv) Capital Turnover ratio, Return on capital employed

Q7(c) Write short notes on the following:

- (i) Deep Discount Bonds
- (ii) Angle of Incidence

Ans. 7(c)(i) Deep Discount Bonds

Deep Discount Bonds is a form of zero-interest bonds. These bonds are sold at a discounted value and on maturity face value is paid to the investors. In such bonds, there is no interest payout during lock in period.

(ii) Angle of Incidence

This angle is formed by the intersection of sales line and total cost line at the break-even point .

This angle shows the rate at which profits are being earned once the break-even point has been reached. The wider the angle the greater is the rate of earning profits. A large angle of incidence with a high margin of safety indicates extremely favourable position.

Q7(d) Discuss basic assumptions of Cost Volume Profit analysis.

Ans. 7(d) CVP analysis is based on the following assumptions:

1. Changes in the levels of revenues and costs arise only because of changes in the number of product (or service) units produced and sold – for example, the number of television sets produced and sold by Sony Corporation or the number of packages delivered by Overnight Express. The number of output units is the only revenue driver and the only cost driver. Just as a cost driver is any factor that affects costs, a revenue driver is a variable, such as volume, that causally affects revenues
2. Total costs can be separated in to two components; a fixed component that does not vary with output level and a variable component that changes with respect to output level.
Furthermore, variable costs include both direct variable costs and indirect variable costs of a product. Similarly, fixed costs include both direct fixed costs and indirect fixed costs of a product
3. When represented graphically, the behaviours of total revenues and total costs are liner (meaning they can be represented as a straight line) in relation to output level within a relevant range (and time period)
4. Selling price, variable cost per unit, and total fixed costs (within a relevant range and time period) are known and constant.
5. The analysis either covers a single product or assumes that the proportion of different products when multiple products are sold will remain constant as the level of total units sold changes
6. All revenues and costs can be added, subtracted, and compared without taking into account

Q7(e) Distinguish between bill of material and material requisition note.

Ans. 7(e) Difference between bills of material and material Requisition Note:

Bills of material	Material requisition note
It is the document prepared by the drawing office	It is prepared by the foreman of the consuming department
It is a complete schedule of component parts and raw materials required for a particular job or work order.	It is a document authorizing store-keeper to issue materials to the consuming department
It often serves the purpose of a stores requisition as it shows the complete schedule of materials required for a particular job i.e. it can replace stores requisition.	It cannot replace a bill of materials.
It can be used for the purpose of quotations	It is useful in arriving historical cost only.
It helps in keeping a quantitative control on materials drawn through stores Requisition.	It shows the material actually drawn from stores.

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2nd Floor, D 64/29 F Bank Colony

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