Roll No. ....

Total No. of Questions – 7

Total No. of Printed Pages – 12

Time Allowed – 3 Hours

Maximum Marks – 100

MRN

Answers are to be given only in English except in the case of Candidates who have opted for Hindi Medium. If a candidate has not opted for Hindi Medium, his/her answers in Hindi will not be valued.

Question No. 1 is compulsory.

Answer any **five** questions from the remaining **six** questions.

Working notes should form part of the answers.

Marks

1. Answer the following : **4×5 =20**

(a) ABC Limited started its operations in the year 2013 with a total production capacity of 2,00,000 units. The following information, for two years, are made available to you :

	Year 2013	Year 2014
Sales (units)	80,000	1,20,000
Total Cost (₹)	34,40,000	45,60,000

There has been no change in the cost structure and selling price and it is anticipated that it will remain unchanged in the year 2015 also.

Selling price is ₹ 40 per unit.

Calculate :

(i) Variable cost per unit.

(ii) Profit Volume Ratio.

(iii) Break-Even Point (in units)

(iv) Profit if the firm operates at 75% of the capacity.

(b) X Y Z Limited is drawing a production plan for its two products – Product 'xml' and 'Product 'yml' for the year 2015-16. The company's policy is to maintain closing stock of finished goods at 25% of the anticipated volume of sales of the succeeding month.

The following are the estimated data for the two products :

	xml	yml
Budgeted Production (in units)	2,00,000	1,50,000
Direct Material (per unit)	₹ 220	₹ 280
Direct Labour (per unit)	₹ 130	₹ 120
Direct Manufacturing Expenses	₹ 4,00,000	₹ 5,00,000

The estimated units to be sold in the first four months of the year 2015-16 are as under :

	April	May	June	July
xml	8,000	10,000	12,000	16,000
yml	6,000	8,000	9,000	14,000

Prepare :

(i) Production Budget (Month wise)

(ii) Production cost Budget (for first quarter of the year)

(c) A new customer has approached a firm to establish new business connection. The customer require 1.5 month of credit. If the proposal is accepted, the sales of the firm will go up by ₹ 2,40,000 per annum. The new customer is being considered as a member of 10% risk of non-payment group.

The cost of sales amounts to 80% of sales. The tax rate is 30% and the desired rate of return is 40% (after tax).

Should the firm accept the offer ? Give your opinion on the basis of calculations.

(d) Following information are related to four firms of the same industry :

FIRM	Change in Revenue	Change in Operating Income	Change in Earning per Share
P	27%	25%	30%
Q	25%	32%	24%
R	23%	36%	21%
S	21%	40%	23%

Find out :

(i) degree of operating leverage, and

(ii) degree of combined leverage for all the firms.

Marks

. (a) QS Limited has furnished the following information : **8**

Standard overhead absorption rate per unit	₹ 20
Standard rate per hour	₹ 4
Budgeted production	12000 units
Actual production	15560 units
Actual working hours	74000

Actual overheads amounted to ₹ 2,95,000, out of which ₹ 62,500 are fixed. Overheads are based on the following flexible budget :

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

Calculate following overhead variances on the basis of hours :

(i) Variable overhead efficiency variance.

(ii) Variable overhead expenditure variance.

(iii) Fixed overhead efficiency variance.

(iv) Fixed overhead capacity variance.

Marks

(b) SSR Ltd. has furnished the following ratios and information relating to the year ended 31st March, 2015. 8

Sales	₹ 60 Lacs
Return on Net worth	25%
Rate of Income tax	50%
Share Capital to reserves	7 : 3
Current Ratio	2
Net-Profit to Sales (after tax)	6.25%
Inventory Turnover	12
(Based on cost of goods sold and closing stock)	
Cost of goods sold	₹ 18 Lacs
Interest on Debentures (@ 15%)	₹ 60,000
Sundry Debtors	₹ 2 Lacs
Sundry Creditors	₹ 2 Lacs

You are required to :

(i) Calculate the operating expenses for the year ended 31st March, 2015.

(ii) Prepare a Balance Sheet as on 31st March, 2015.

Marks

3. (a) A mini-bus, having a capacity of 32 passengers, operates between two places – 'A' and 'B'. The distance between the place 'A' and place 'B' is 30 km. The bus makes 10 round trips in a day for 25 days in a month. On an average, the occupancy ratio is 70% and is expected throughout the year. 8

The details of other expenses are as under :

	Amount (₹)	
Insurance	15,600	Per annum
Garage Rent	2,400	Per quarter
Road Tax	5,000	Per annum
Repairs	4,800	Per quarter
Salary of operating staff	7,200	Per month
Tyres and Tubes	3,600	Per quarter
Diesel : (one litre is consumed for every 5 km)	13	Per litre
Oil and Sundries	22	Per 100 km run
Depreciation	68,000	Per annum

Passenger tax @ 22% on total taking is to be levied and bus operator requires a profit of 25% on total taking.

Prepare operating cost statement on the annual basis and find out the cost per passenger kilometer and one way fare per passenger.

Marks

(b) Given below are the data on a capital project 'M'. 8

Annual cash inflows ₹ 60,000

Useful life 4 years

Internal rate of return 15%

Profitability index 1.064

Salvage value 0

You are required to calculate for this project M :

(i) Cost of project

(ii) Payback period

(iii) Cost of capital

(iv) Net present value

PV factors at different rates are given below :

Discount factor	15%	14%	13%	12%
1 year	0.869	0.877	0.885	0.893
2 year	0.756	0.769	0.783	0.797
3 year	0.658	0.675	0.693	0.712
4 year	0.572	0.592	0.613	0.636

Marks

4. (a) A company manufactures one main product (M_1) and two by-products B_1 and B_2. For the month of January 2015, following details are available : **8**

Total cost upto separation point ₹ 2,12,400.

	M_1	B_1	B_2
Cost after separation	–	₹ 35,000	₹ 24,000
No. of Units produced	4,000	1,800	3,000
Selling Price per unit	₹ 100	₹ 40	₹ 30
Estimated net profit as percentage to Sales Value	–	20%	30%
Estimated selling expenses as percentage to Sales Value	20%	15%	15%

There are no opening or closing inventories.

Prepare statement showing :

(i) Allocation of Joint Cost; and

(ii) Product-wise and overall profitability of the company for January, 2015.

(b) A Ltd. wishes to raise additional finance of ₹ 30 lakhs for meeting its investment plans. The company has ₹ 6,00,000 in the form of retained earnings available for investment purposes. 8

The following are the further details :

- Debt equity ratio – 30 : 70
- Cost of debt – at the rate of 11% (before tax) upto ₹ 3,00,000 and 14% (before tax) beyond that.
- Earnings per share – ₹ 15.
- Dividend payout – 70% of earnings.
- Expected growth rate in dividend – 10%.
- Current market price per share – ₹ 90.
- Company's tax rate is 30% and shareholder's Personal tax rate is 20%.

You are required to :

(i) Calculate the post tax average cost of additional debt.

(ii) Calculate the cost of retained earnings and cost of equity.

(iii) Calculate the overall weighted average (after tax) cost of additional finance.

5. (a) Explain 'Sunk Cost' and 'Opportunity Cost'. 4×4 =16

(b) Write notes on 'Escalation Clause'.

(c) Explain 'Sales and Lease Back'.

(d) Explain 'Miller-Orr Cash Management model'.

Marks

6. (a) A machine shop cost centre contains three machines of equal capacities. Three operators are employed on each machine, payable ₹ 20 per hour each. The factory works for 48 hours in a week which includes 4 hours set up time. The work is jointly done by operators. The operators are paid fully for the 48 hours. In addition, they are also paid a bonus of 10% of productive time. Costs are reported for this company on the basis of thirteen, four-weekly period. **8**

The company, for the purpose of computing machine hour rate includes the direct wages of the operator and also recoups the factory overheads allocated to the machines. The following details of factory overheads applicable to the cost centres are available :

Original Cost of each machine	– ₹ 52,000
Depreciation on the original cost of the machine	– 10% p.a.
Maintenance & Repair per week per machine	– ₹ 60
Consumable Stores per week per machine	– ₹ 75
Power : 20 units per hour per machine	– 80 paise per unit
Apportionment to the cost centre :	
Rent per annum	₹ 5,400
Heat and Light per annum	₹ 9,720
Foreman's Salary per annum	₹ 12,960

Calculate :

(i) the cost of running one machine for a four week period.

(ii) machine hour rate.

Marks

(b) The following information is provided by the DVP Ltd. for the year ending 31st March, 2015. **8**

Raw Material storage period	50 days
Work in progress conversion period	18 days
Finished Goods storage period	22 days
Debt Collection period	45 days
Creditors' payment period	55 days
Annual Operating Cost	₹ 21 Lacs
(Including depreciation of ₹ 2,10,000)	
(1 year = 360 days)	

You are required to calculate :

(i) Operating Cycle period.

(ii) Number of Operating Cycles in a year.

(iii) Amount of working capital required for the company on a cash cost basis.

(iv) The company is a market leader in its product, there is virtually no competitor in the market. Based on a market research, it is planning to discontinue sales on credit and deliver products based on pre-payments. Thereby, it can reduce its working capital requirement substantially. What would be the reduction in working capital requirement due to such decision ?

4

Marks

7. Answer any **four** of the following : 4×4 =16

(a) Define 'Cost Centre' and state its types.

(b) State benefits of Integrated Accounting.

(c) Differentiate between 'Factoring' and 'Bill discounting'.

(d) Discuss the conflicts in Profit versus Wealth maximization principle of the firm.

(e) Define 'Present Value' and 'Perpetuity'.
