

Roll No.

Total No. of Questions – 7

Total No. of Printed Pages – 8

Time Allowed – 3 Hours

Maximum Marks – 100

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Answer to questions 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 answers in Hindi will not be valued.

Question No. 1 is compulsory.

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

Working notes should form part of the answer.

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1. Answer the following :

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- (a) AK Limited produces and sells a single product. Sales budget for calendar year 2012 by quarters is as under : **=20**

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 through-out 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.

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- (b) A machine costing ₹ 10 lacs was purchased on 1-4-2011. 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 :
- (i) Working hours of the machine for the year was 4,200 including 200 non-productive hours.
 - (ii) Repairs and maintenance for the new machine during the year was ₹ 5,000.
 - (iii) Insurance Premium was paid for all the machine ₹ 9,000.
 - (iv) New machine consumes 8 units of electricity per hour, the rate per unit being ₹ 3.75.
 - (v) The new machine occupies $\frac{1}{10}$ area of the department. Rent of the department is ₹ 2,400 per month.
 - (vi) Depreciation is charged on straight line basis.
- Compute machine hour rate for the new machine.
- (c) RES Ltd. is an 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 :
- (i) Market value of RES Ltd.
 - (ii) Cost of Equity k_e
 - (iii) Weighted average cost of capital and comment on it.
- (d) A company is presently having credit sales of ₹ 12 lakh. The existing credit terms are 1/10, net 45 days and 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 liberalisation of its existing credit terms to 2/10, net 45 days. It is expected that sales are likely to 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 receivables is 15 percent (pre tax). 50 percent and 80 percent of customers in term of sales revenue are expected to avail cash discount under existing and liberalisation scheme respectively. The tax rate is 30%.
- Should the company change its credit terms ? (Assume 360 days in a year).

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2. (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 :

	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 ₹ 13,500 was found unsuitable and sold for ₹ 10,000. Contract price was ₹ 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 contractor has been paid ₹ 20,00,000 on account. Depreciation on plant is charged on straight line basis. Prepare Contract Account.

- (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

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Additional Information :

- (i) 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.
- (ii) Provisions for tax made during the year for ₹ 1,78,000.
- (iii) On 1-4-2011 company redeemed debenture of ₹ 1,00,000 at a premium of 5%.
- (iv) Company has issued fully paid bonus shares of ₹ 2,00,000 by capitalisation of profit.

Prepare Cash Flow Statement.

3. (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. 8

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 :

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

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- (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.

4. (a) SJ Ltd. has furnished the following information : 8

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.
- Fixed overhead efficiency and capacity variance.

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

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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

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

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

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- (i) Interest paid 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.

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

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

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6. (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 allocate 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.

- (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.

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7. Answer any **four** of the following : 4×4
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- (a) "The profit maximization is not an operationally feasible criterion." Comment on it.
- (b) Explain the important ratios that would be used in each of the following situations.
- (i) A bank is approached by a company for a loan of ₹ 50 lakh for working capital purposes.
 - (ii) A long term creditors interested in determining whether his claim is adequately secured.
 - (iii) A shareholder who is examining his portfolio and who is to decide whether he should hold or sell his holding in the company.
 - (iv) A finance manager interested to know effectiveness with which a firm uses its available resources.
- (c) Write short notes on the following :
- (i) Deep Discount Bonds
 - (ii) Angle of Incidence
- (d) Discuss basic assumptions of Cost Volume Profit analysis.
- (e) Distinguish between bill of material and material requisition note.
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