Roll No. .....

Total No. of Questions – **7** Total No. of Printed Pages – **12**

Time Allowed – 3 Hours Maximum Marks – **100**

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Answers 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/her answers in Hindi will not be valued.

Question No. 1 is compulsory.

Attempt any **five** questions out of the remaining **six** questions. In case, any candidate answer extra question(s)/sub-question(s) over and above the required number, then only the requisite number of questions first answered in the answer book shall be valued and subsequent extra questions answered shall be ignored.

Working Notes should form part of the answer.

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1. Answer the following : **5×4 =20**

(a) The following particulars refers to process used in the treatment of material subsequently, incorporated in a component forming part of an electrical appliance :

(i) The original cost of the machine used (Purchased in June 2008) was ₹ 10,000. Its estimated life is 10 years, the estimated scrap value at the end of its life is ₹ 1,000, and the estimated working time per year (50 weeks of 44 hours) is 2200 hours of which machine maintenance etc., is estimated to take up 200 hours.

No other loss of working time expected, setting up time, estimated at 100 hours, is regarded as productive time. (Holiday to be ignored).

Marks

(ii) Electricity used by the machine during production is 16 units per hour at cost of a 9 paisa per unit. No current is taken during maintenance or setting up.

(iii) The machine required a chemical solution which is replaced at the end of week at a cost of ₹ 20 each time.

(iv) The estimated cost of maintenance per year is ₹ 1,200.

(v) Two attendants control the operation of machine together with five other identical machines. Their combined weekly wages, insurance and the employer's contribution to holiday pay amount ₹ 120.

(vi) Departmental and general works overhead allocated to this machine for the current year amount to ₹ 2,000.

You are required to calculate the machine hour rate of operating the machine.

(b) A dairy product company manufacturing baby food with a shelf life of one year furnishes the following information :

(i) On 1st January, 2016, the company has an opening stock of 20,000 packets whose variable cost is ₹ 180 per packet.

(ii) In 2015, production was 1,20,000 packets and the expected production in 2016 is 1,50,000 packets. Expected sales for 2016 is 1,60,000 packets.

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(iii) In 2015, fixed cost per unit was ₹ 60 and it is expected to increase by 10% in 2016. The variable cost is expected to increase by 25%. Selling price for 2016 has been fixed at ₹ 300 per packet.

You are required to calculate the Break-even volume in units for 2016.

(c) (i) What is a sinking fund and how is it calculated ?

(ii) A company has purchased a plant for ₹ 10,00,000 with a useful life of 6 years. It expects that ₹ 15,00,000 will be required to replace the plant after 6 years. To ensure that money is available at the time of replacement, the company has created a sinking fund.

You are required to determine the amount to be deposited annually, if the fund earns interest at 8% per annum. Given $CVFA_{0.08, 6} = 7.336$

(d) A company had the following balance sheet as on 31st March, 2015.

Liabilities	Amount ₹	Assets	Amount ₹
Equity share capital of ₹ 10 each	40,00,000	Fixed Assets (Net)	1,28,00,000
Reserve & Surplus	8,00,000	Current Assets	32,00,000
15% Debentures	80,00,000		
Current Liabilities	32,00,000		
	1,60,00,000		**1,60,00,000**

The additional information given is as under :

Fixed cost per annum (excluding interest)	₹ 32,00,000.
Variable operating cost ratio	70%.
Total assets turnover ratio	2.5
Income tax rate	30%.

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Calculate the following :

(i) Operating Leverage

(ii) Financial Leverage

(iii) Combined Leverage

(iv) Earning per share

2. (a) The following information is available from a company's records for March, 2016 : **8**

(a)	Opening Balance of Creditors Account	₹ 25,000
(b)	Closing Balance of Creditors Account	₹ 40,000
(c)	Payment made to Creditors	₹ 5,80,000
(d)	Opening Balance of Stores Ledger Control Account	₹ 40,000
(e)	Closing Balance of Stores Ledger Control Account	₹ 65,000
(f)	Wages paid (for 8000 hours)	₹ 4,00,000
	20% relate to indirect workers	
(g)	Various indirect expenses incurred	₹ 60,000
(h)	Opening balance of WIP control account	₹ 50,000

(i) Inventory of WIP at the end of the month includes material worth ₹ 35,000 on which 400 labour hours have been booked.

(j) Factory overhead is charged to production at budgeted rate based on direct labour hours.

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(k) Budgeted overhead cost is ₹ 20,80,000 for budgeted direct labour hours of 1,04,000.

You are required to prepare Creditors A/c, Stores Ledger Control A/c, WIP Control A/c, Wages Control A/c and Factory Overhead Control A/c.

(b) With the following ratios and further information given below prepare a Trading Account, Profit and Loss Account and Balance Sheet of ABC Company. **8**

Fixed Assets	₹ 40,00,000
Closing stock	₹ 4,00,000
Stock turnover ratio	10
Gross profit ratio	25 percent
Net profit ratio	20 percent
Net profit to capital	1/5
Capital to total liabilities	1/2
Fixed assets to capital	5/4
Fixed assets / Total current assets	5/7

3. (a) X Associates undertake to prepare income tax returns for individuals for a fee. They use the weighted average method and actual costs for the financial reporting purposes. However, for internal reporting, they use a standard costs system. The standards, based on equivalent performance, have been established as follows : **8**

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Labour per return	5 hrs	@ ₹ 40 per hour
Overhead per return	5 hrs	@ ₹ 20 per hour

For March 2015 performance, budgeted overhead is ₹ 98,000 for standard labour hours allowed. The following additional information pertains to the month of March 2015 :

March 1	Return-in-process (25% complete)	200 Nos
	Return started in March	825 Nos
March 31	Return-in-process (80% complete)	125 Nos

Cost Data :

March 1	Return-in-process labour	₹ 12,000
	– Overheads	₹ 5,000
March 1 to 31	Labour : 4000 hours	₹ 1,78,000
	Overheads	₹ 90,000

You are required to compute :

(a) For each element, equivalent units of performance and the actual cost per equivalent unit.

(b) Actual cost of return-in-process on March 31.

(c) The standard cost per return.

(d) The labour rate and labour efficiency variance as well as overhead volume and overhead expenditure variance.

Marks

(b) A trader whose current sales are ₹ 4,20,000 per annum and an average collection period of 30 days, wants to pursue a more liberal policy to improve sales. A study made by a management consultant reveals the following information : 8

Credit Policy	Increase in Collection Period	Increase in Sales	Present default anticipated
I	10 days	₹ 21,000	1.5%
II	30 days	₹ 52,500	3%
III	45 days	₹ 63,000	4%

The selling price per unit is ₹ 3. Average cost per unit is ₹ 2.25 and variable cost per unit is ₹ 2. The current bad-debts loss is 1%. Required return on additional investment is 20%. Assume a 360 days year.

Which of the above policies would you recommend for adoption ?

4. (a) A factory producing article A also produces a by-product B which is further processed into finished product. The joint cost of manufacture is given below : 8

Material	₹ 5,000
Labour	₹ 3,000
Overhead	₹ 2,000
	₹ 10,000

Subsequent cost in ₹ are given below :

	A	B
Material	3,000	1,500
Labour	1,400	1,000
Overhead	600	500
	5,000	3,000

Selling prices are A ₹ 16,000

B ₹ 8,000

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Estimated profit on selling prices is 25% for A and 20% for B.

Assume that selling and distribution expenses are in proportion of sales prices. Show how you would apportion joint costs of manufacture and prepare a statement showing cost of production of A and B.

Q5 Given below are the data on a capital project 'C' : 8

Cost of the project	₹ 2,28,400
Useful life	4 years
Profitability index	1.0417
Internal rate of return	15%
Salvage value	0

You are required to calculate :

(i) Annual cash flow

(ii) Cost of capital

(iii) Net present value (NPV)

(iv) Discounted payback period

Given the following table of discount factors :

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

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5. (a) State the difference between cost control and cost reduction. 4×4 =16

(b) Write treatment of items associated with purchase of material :

(i) Cash discount

(ii) Subsidy/Grant/Incentives

(iii) VAT or State Sales Tax

(iv) Commission brokerage paid

(c) Distinguish between operating lease and finance lease.

(d) Describe the three principles relating to selection of marketable securities.

6. (a) (i) The M-Tech Manufacturing Company is presently evaluating two possible processes for the manufacture of a toy. The following information is available : 4

Particulars	Process A ₹	Process B ₹
Variable cost per unit	12	14
Sales price per unit	20	20
Total fixed costs per year	30,00,000	21,00,000
Capacity (in units)	4,30,000	5,00,000
Anticipated sales (Next year, in units)	4,00,000	4,00,000

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Suggest :

1. Which process should be chosen ?

2. Would you change your answer as given above, if you were informed that the capacities of the two processes are as follows :

A 6,00,000 units; B 5,00,000 units ? Why ?

(ii) State the difference between Fixed Budget and Flexible Budget. 4

(b) The X Company has following capital structure at 31st March, 2015 which is considered to be optimum. 8

	₹
14% Debentures	3,00,000
11% Preference Shares	1,00,000
Equity (100000 shares)	16,00,000
	20,00,000

The company's share has a current market price of ₹ 23.60 per share. The expected dividend per share next year is 50% of 2015 EPS. The following are the earning per share figure for the company during preceding ten years. The past trends are expected to continue.

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Year	EPS (₹)	Year	EPS (₹)
2006	1.00	2011	1.61
2007	1.10	2012	1.82
2008	1.21	2013	1.95
2009	1.33	2014	2.15
2010	1.46	2015	2.36

The company issued new debentures carrying 16% rate of interest and the current market price of debenture is ₹ 96.

Preference share ₹ 9.20 (with dividend of ₹ 1.1 per share) were also issued. The company is in 50% tax bracket.

(i) Calculate after tax cost of

(a) New debt (b) New Preference share (c) New equity share (consuming new equity from retained earning)

(ii) Calculate marginal cost of capital when no new shares was issued.

(iii) How much can be spent for capital investment before new ordinary shares must be sold ? Assuming the retained earning for next year's investment are 50% of 2015.

(iv) What will be the marginal cost of capital when the funds exceeds the amount calculated in (iii), assuming new equity is issued at ₹ 20 per share ?

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

(a) What is cost plus contract ? What are its advantages ?

(b) Narrate the objectives of cost accounting.

(c) State, which of the following would result in inflow/outflow of funds, if the funds were defined as working capital.

(i) Purchase of a fixed asset on credit of two months.

(ii) Sale of a fixed asset (book value ₹ 8,000) at a loss of ₹ 7,000.

(iii) Payment of final dividend already declared.

(iv) Writing off Bad debts against a provision for doubtful debts.

(d) State the principles that should be followed while designing the capital structure of a company.

(e) Explain what do you mean by :

(i) Leveraged Lease

(ii) Profit Centres.
