

Cost Accounting and Financial Management : May 2007

Roll No.....

Total No. of Questions— 8]

[Total No. of Printed Pages—5

Time Allowed : 3 Hours

Maximum Marks : 100

Answers to questions are to be given only in English except in the cases of candidates who have opted for Hindi medium. If a candidate who has not opted for Hindi medium, answers in Hindi, his answers in Hindi will not be valued.

All questions are compulsory.

Working notes should form part of the answer wherever appropriate, suitable assumptions should be made.

Marks

1. Answer any five of the following:

5x2=10

(i) Using Taylor's differential piece rate system, find the earning of A from the following particulars:

Standard time per piece	12 minutes
Normal rate per hour (in a 8 hours day)	Rs. 20
A produced	37 Units

(ii) Briefly discuss, how the synergetic effect help in reduction in costs.

(iii) Explain in brief the explicit cost with examples.

(iv) Explain briefly the conditions when supplementary rates are used.

(v) The average annual consumption of a material is 18,250 units at a price of Rs. 36.50 per unit. The storage cost is 20% on an average inventory and the cost of placing an order is Rs. 50. How much quantity is to be purchased at a time?

(vi) Enumerate the various methods of Time booking.

2. A company has three production departments (M1, M2 and A1) and three service department, one of which Engineering service department, servicing the M1 and M2 only. The relevant informations are as follows:

	Product X	Product Y
M ₁	10 Machine hours	6 Machine hours
M ₂	4 Machine hours	14 Machine hours
A ₁	14 Direct Labour hours	18 Direct Labour hours

The annual budgeted overhead cost for the year are

	Indirect Wages (Rs.)	Consumable Supplies (Rs.)
M ₁	46,520	12,600
M ₂	41,340	18,200
A ₁	16,220	4,200
Stores	8,200	2,800
Engineering Service	5,340	4,200
General Service	7,520	3,200

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(2)

Marks

Rs.

— Depreciation on Machinery	39,600
— Insurance of Machinery	7,200
— Insurance of Building	3,240 (Total building insurance cost for M1 is one third of annual premium)
— Power	6,480
— Light	5,400
— Rent	12,675 (The general service deptt. is located in a building owned by the company. It is valued at Rs. 6,000 and is charged into cost at notional value of 8% per annum. This cost is additional to the rent shown above)

— The value of issues of materials to the production departments are in the same proportion as shown above for the Consumable supplies.

The following data are also available:

Department	Book Value Machinery Rs.	Area (Sq. ft)	Effective H.P. hours %	Production Direct Labour hour	Capacity Machine hour
M ₁	1,20,000	5,000	50	2,00,000	40,000
M ₂	90,000	6,000	36	1,50,000	50,000
A ₁	30,000	8,000	05	3,00,000	
Stores	12,000	2,000	—		
Engg. Service	36,000	2,500	10		
General Service	12,000	1,500	—		

Required:

- (i) Prepare a overhead analysis sheet, showing the bases of apportionment of overhead to departments.
 - (ii) Allocate service department overheads to production department ignoring the apportionment of service department costs among service departments.
 - (iii) Calculate suitable overhead absorption rate for the production departments.
 - (iv) Calculate the overheads to be absorbed by two products, X and Y. 6+4+3+2
3. (a) AKP Builders Ltd. Commenced a contract on April 1, 2005. The total contract was for Rs. 5,00,000. Actual expenditure for the period April 1, 2005 to March 31, 2006 and estimated expenditure for April 1, 2006 to December 31, 2006 are given below: 8

	2005–06 (Actuals) Rs.	2006–07 (9 months) (Estimated) Rs.
Material Issued	90,000	85,750
Labour : Paid	75,000	87,325
Outstanding at the end	6,250	8,300
Plant	25,000	—
Sundry Expenses : Paid	7,250	6,875
Prepaid at the end	625	—
Establishment charges	14,625	—

A part of the material was unsuitable and was sold for Rs. 18,125 (Cost being Rs. 15,000) and a part of plant was scrapped and disposed of for Rs. 2,875. The value of plant at site on 31 March, 2006 was Rs. 7,750 and the value of material at site was Rs. 4,250. Cash received on account to date was Rs. 1,75,000, representing 80% of the work certified. The cost of work uncertified was valued at Rs. 27,375.

The contractor estimated further expenditure that would be incurred in completion of the contract:

- The contract would be completed by 31st December, 2006.
- A further sum of Rs. 31,250 would have to be spent on the plant and the residual value of the plant on the completion of the contract would be Rs. 3,750.

- Establishment charges would cost the same amount per month as in the previous year.
- Rs. 10,800 would be sufficient to provide for contingencies.

Required:

Prepare Contract account and calculate estimated total profit on this contract. Profit transferrable to Profit and Loss account is to be calculated by reducing estimated Profit in proportion of work certified and contract price.

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(3)

Marks

- (b) A Company produces two joint products P and Q in 70 : 30 ratio from basic raw materials in department A. The input output ratio of department A is 100 : 85. Product P can be sold at the split of stage or can be processed further at department B and sold as product AR. The input output ratio is 100 : 90 of department B. The department B is created to process product A only and to make it product AR.

8

The selling prices per kg. are as under:

Product P Rs. 85

Product Q Rs. 290

Product AR Rs. 115

The production will be taken up in the next month.

Raw materials 8,00,000 Kgs.

Purchase price Rs. 80 per Kg.

	Deptt. A Rs. Lacs	Deptt. B Rs. Lacs
Direct materials	35.00	5.00
Direct labour	30.00	9.00
Variable overheads	45.00	18.00
Fixed overheads	40.00	32.00
Total	<u>150.00</u>	<u>64.00</u>

Selling Expenses:

	Rs. in Lacs
Product P	24.60
Product Q	21.60
Product AR	16.80

Required:

- Prepare a statement showing the apportionment of joint costs.
- State whether it is advisable to produce product AR or not.

4. Answer any three of the following:

3x3=9

- Discuss the treatment of spoilage and defectives.
- What items are generally included in good uniform costing manual?
- "Operation costing is defined as refinement of Process costing." Explain it.
- Enumerate the factors which cause difference in profits as shown in Financial Accounts and Cost Accounts.

5. Answer any five of the following: 5x2=10
- Define Modified Internal Rate of Return method.
 - Explain the need of debt-service coverage ratio.
 - Explain the term 'Ploughing back of Profits'.
 - ABC Limited has an average cost of debt at 10 per cent and tax rate is 40 per cent. The Financial leverage ratio for the company is 0.60. Calculate Return on Equity (ROE) if its Return on Investment (ROI) is 20 per cent.
 - Explain in brief the assumptions of Modigliani-Miller theory.
 - A person is required to pay four equal annual payments of Rs. 4,000 each in his Deposit account that pays 10 per cent interest per year. Find out the future value of annuity at the end of 4 years.

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6. (a) The Balance Sheet of JK Limited as on 31st March, 2005 and 31st March, 2006 are given below: 15

Balance Sheet as on

			(Rs. '000)		
Liabilities	31.03.05	31.03.06	Assets	31.03.05	31.03.06
Share Capital	1,440	1,920	Fixed Assets	3,840	4,560
Capital Reserve	—	48	Less: Depreciation	1,104	1,392
General Reserve	816	960		<u>2,736</u>	<u>3,168</u>
Profit and Loss Account	288	360	Investment	480	384
9% Debenture	960	672			
Current Liabilities	576	624	Cash	210	312
Proposed Dividend	144	174	Other Current Assets		
Provision for Tax	432	408	(including Stock)	1,134	1,272
Unpaid Dividend	—	18	Preliminary Expenses	96	48
	<u>4,656</u>	<u>5,184</u>		<u>4,656</u>	<u>5,184</u>

Additional Informations

- During the year 2005-2006, Fixed Assets with a book value of Rs. 2,40,000 (accumulated depreciation Rs. 84,000) was sold for Rs. 1,20,000.
- Provided Rs. 4,20,000 as depreciation.
- Some investments are sold at a profit of Rs. 48,000 and Profit was credited to Capital Reserve.
- It decided that stocks be valued at cost, whereas previously the practice was to value stock at cost less 10 per cent. The stock was Rs. 2,59,200 as on 31.03.05. The stock as on 31.03.06 was correctly valued at Rs. 3,60,000.
- It decided to write off Fixed Assets costing Rs. 60,000 on which depreciation amounting to Rs. 48,000 has been provided.
- Debentures are redeemed at Rs. 105.

Required:

Prepare a Cash Flow Statement.

7. (a) The following details of RST Limited for the year ended 31March, 2006 are given below: 8

Operating leverage	1.4
Combined leverage	2.8
Fixed Cost (Excluding interest)	Rs. 2.04 lakhs
Sales	Rs. 30.00 lakhs
12% Debentures of Rs. 100 each	Rs. 21.25 lakhs
Equity Share Capital of Rs. 10 each	Rs. 17.00 lakhs
Income tax rate	30 per cent

Required:

- (i) Calculate Financial leverage
- (ii) Calculate P/V ratio and Earning per Share (EPS)
- (iii) If the company belongs to an industry, whose assets turnover is 1.5, does it have a high or low assets leverage?
- (iv) At what level of sales the Earning before Tax (EBT) of the company will be equal to zero?

Contind...

(5)

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- (b) The turnover of PQR Ltd. is Rs. 120 lakhs of which 75 per cent is on credit. The variable cost ratio is 80 per cent. The credit terms are 2/10, net 30. On the current level of sales, the bad debts are 1 per cent. The company spends Rs. 1,20,000 per annum on administering its credit sales. The cost includes salaries of staff who handle credit checking, collection etc. These are avoidable costs. The past experience indicates that 60 per cent of the customers avail of the cash discount, the remaining customers pay on an average 60 days after the date of sale.

The Book debts (receivable) of the company are presently being financed in the ratio of 1 : 1 by a mix of bank borrowings and owned funds which cost per annum 15 per cent and 14 per cent respectively.

A factoring firm has offered to buy the firm's receivables. The main elements of such deal structured by the factor are:

- (i) Factor reserve, 12 per cent
- (ii) Guaranteed payment, 25 days
- (iii) Interest charges, 15 per cent, and
- (iv) Commission 4 per cent of the value of receivables.

Assume 360 days in a year.

What advise would you give to PQR Ltd. - whether to continue with the in house management of receivables or accept the factoring firm's offer?

8. Answer any three of the following:

3x3=9

- (i) Differentiate between Business risk and Financial risk.
- (ii) Diagrammatically present the DU PONT CHART to calculate return on equity.
- (iii) What are the main responsibilities of a Chief Financial Officer of an organisation?
- (iv) Explain in brief the features of Commercial Paper.



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