NOVEMBER – 2007
Paper – 4
COST ACCOUNTING and FINANCIAL MANAGEMENT

1) Answer any **Five** of the following:

(i) Discuss briefly the relevant costs with Examples.

(ii) Calculate total passenger kilometers from the following information:

Number of buses 6, number of days operating in a month 25, trips made by each bus per day 8, distance covered 20 kilometres (one side), capacity of bus 40 passengers, normally 80% of capacity utilization.

(iii) Explain the importance of an Escalation Clause in contract cost.

(iv) Calculate Efficiency and Capacity ratio from the following figures:

Budgeted production	80 units
Actual production	60 units
Standard time per unit	8 units
Actual hours worked	500

(v) Explain Blanket overhead rate.

(vi) Explain the cost accounting treatment of unsuccessful Research and Development cost.

(5 X 2 = 10 Marks)

2) KPR Limited operates a system of standard costing in respect of one of its products which is manufactured with in a single cost centre. The Standard Cost Card of a product is as under:

Standard		Unit cost (Rs.)
Direct material	5 kgs @ Rs.4.20	21.00
Direct labour	3 hours @ Rs.3.00	9.00
Factory overhead	Rs.1.20 per labour hour	3.60
	Total manufacturing cost	33.60

The production schedule for the month of June, 2007 required competition of 40,000 units. However 40,960 units were completed during the month without opening and closing work – in process inventories.

Purchases during the month of June, 2007, 2,25,000 kgs of material at the rate of Rs.4.50 per kg. Production and Sales records for the month showed the following actual results:

Material used 2,05,600 kgs.	
Direct labour 1,21,200 hours; cost incurred	Rs.3,87,840
Total factory overhead cost incurred	Rs.1,00,000
Sales	40,000 units

Selling price to be so fixed as to allow a mark-up of 20 percent on selling price.

Required:

(i) Calculate material variance based on consumption of material.

(ii) Calculate labour variance and the total variance for factory overhead.

(iii) Prepare Income statement for June, 2007 showing actual gross margin.

(iv) An incentive scheme is in operation in the company whereby employees are paid a bonus of 50% of direct labour hour saved at standard direct labour hour rate. Calculate the Bonus amount.

(3 + 4 + 6 + 2 = 15 Marks)

3) **(a)** ABC Limited manufactures a product 'ZX' by using the process namely R.T. For the month of May, 2007, the following datas are available:

	Process RT
Material introduced (units)	16,000
Transfer to next process (units)	14,400
Work in process:	
At the beginning of the month (units) (4/5 completed)	4,000
At the end of the month (units) (2/3 completed)	3,000

Cost records:

Work in process at the beginning of the month	
Material	Rs.30,000
Conversion cost	Rs.39,200
Cost during the month: materials	Rs.1,20,000
Conversion cost	Rs.1,60,800

Normal spoiled units are 10% of goods finished output transferred to next process.

Defects in these units are identified in their finished state. Material for the product is put in the process at the beginning of the cycle of operation, whereas labour and other indirect cost flow evenly over the year. It has no realizable value for spoiled units.

Required:

(i) Statement of equivalent production (Average cost method);

(ii) Statement of cost and distribution of cost;

(iii) Process accounts. **(2 + 5 + 1 = 8 Marks)**

b) A machine shop cost centre contains three machines of equal capacities. Three operators are employed on each machine, payable Rs.20 per hour each. The factory works for forty- eight hours in a week which includes 4 hours setup time. The work is jointly done by operators. The operators are paid fully for the forty-eight hours. In additions they are paid a bonus of 10 per cent of productive time. Costs are reported for this company on the basis of thirteen four-weekly period.

The company for the purpose of computing machine hour rate includes the direct wages of the operators and also recoups the factory overheads allocated to the machines.

The following details of factory overheads applicable to the cost centre are available:

- Depreciation 10% per annum on original cost of the machine. Original cost of the each machine is Rs.52,000
- Maintenance and repairs per week per machine is Rs.60.
- Consumable stores per week machine are Rs.75.
- Power: 20 units per hours per machine at the rate of 80 paise per unit.
- Apportionment to the cost centre: Rent per annum Rs.5,400, Heat and Light per annum Rs.9,720, and foreman's salary per annum Rs.12,960.

Required:

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

(ii) Calculate machine hour rate. **(7 + 1 = 8 Marks)**

4) Answer any **three** of the following:

(i) Explain essential pre-requisites for integrated accounts.

(ii) Explain, why the Last in First out (LIFO) has an edge over First in First out (FIFO) or any other method of pricing material issues.

(iii) Enumerate the remedial steps to be taken to minimize the labour turnover.

(iv) A company produces single product which sells for Rs.20 per unit. Variable cost is Rs.15 per unit and Fixed overhead for the year is Rs.6,30,000.

Required:

a) Calculate sales value needed to earn a profit of 10% on sales.

b) Calculate sales price per unit to bring BEP down to 1,20,000 units.

c) Calculate margin of safety sales if profit is Rs.60,000. **(3 X 3 = 9 Marks)**

5) Answer any Five of the following:

(i) Explain the concept of leveraged lease.

(ii) Discuss the features of deep discount bonds.

(iii) What is optimum Capital structure? Explain.

(iv) A firm has Sales of Rs.40 lakhs; Variable cost of Rs.25 lakhs; Fixed cost of Rs.6 lakhs; 10% debts of Rs.30 lakhs; and Equity Capital of Rs.45 lakhs.

Required:

Calculate operating and financial leverage.

(v) The demand for a certain product is random. It has been estimated that the monthly demand of the product has a normal distribution with a mean of 390 units. The unit price of product is Rs.25. Ordering cost is Rs.40 per order and inventory carrying cost is estimated to be 35 per cent per year.

Required:

Calculate Economic Order Quantity (EOQ)

(v) Explain the concept of Indian depository receipts. **(5 X 2 = 10 Marks)**

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(vi) Explain the concept of Indian depository receipts. (5x2 = 10 marks)

6. The Balance Sheet of X Ltd. as on 31st March, 2007is as follows:

Liabilities	**Rs. ('000)**	**Assets**		**Rs. ('000)**
Equity share capital	6,000	Fixed Assets (at cost)	16,250	
8% Preference share capital	3,250	Less: Depreciation written off	5,200	11,050
Reserve & Surplus	1,400	Stock		1,950
10% Debentures	1,950	Sundry debtors		2,600
Sundry Creditors	3,250	Cash		250
Total	**15,850**	**Total**		**15,850**

The following additional information is available:

(i) The stock turnover ratio based on cost of goods sold would be 6 times.

(ii) The cost of fixed assets to sales ratio would be 1.4.

(iii) Fixed assets costing Rs. 30,00,000 to be installed on 1st April, 2007, payment would be made on March 31, 2008.

(iv) In March, 2008, a dividend of 7 percent on equity capital would be paid.

(v) Rs.5,50,000, 11% Debentures would be issued on 1st April, 2007.

(vi) Rs. 30,00,000, Equity shares would be issued on 31st March, 2008.

(vii) Creditors would be 25% of materials consumed.

(viii) Debtors would be 10% of sales.

(ix) The cost of goods sold would be 90 percent of sales include material 40 percent and depreciation 5 percent of sales.

(x) The profit is subject to debenture interest and taxation @ 30 percent.

Required:

(i) Prepare the projected Balance Sheet as on 31st March, 2008.

(ii) Prepare projected Cash Flow Statement in accordance with AS - 3. (10+5 = 15 marks)

7.

(a) A newly formed company has applied to the Commercial Bank for the first time for Financing its working capital requirements. The following information is available about the projections for the current year:

Elements of Cost:	Per unit Rs.
Raw Material	40
Direct labour	15
Overhead	30
Total cost	85
Profit	15
Sales	100

Other information:

Raw material in stock: average 4 weeks consumption, Work - in progress (completion stage, 50 percent), on an average half a month. Finished goods in stock: on an average, one month.

Credit allowed by suppliers in one month.

Credit allowed to debtors is two months.

Average time lag in payment of wages is $1^{1/2}$ weeks and 4 weeks in overhead expenses.

Cash in hand and at bank is desired to be maintained at Rs.50,000.

All Sales are on credit basis only.

Required:

(i) Prepare statement showing estimate of working capital needed to finance an activity level of 96,000 units of production. Assume that production is carried on evenly throughout the year, and wages and overhead accrue similarly. For the calculation purpose 4 weeks may be taken as equivalent to a month and 52 weeks in a year.

(ii) From the above information calculate the maximum permissible bank finance by all the three methods for working capital as per Tondon Committee norms; assume the core current assets constitute 25% of the current assets. (5+3 = 8 marks)

(b) XYZ Ltd. is planning to introduce a new product with a project life of 8 years. The project is to be setup in Special Economic Zone (SEZ), Qualifies for one time (at starting) tax free subsidy from the State Government of Rs.25,00,000 on Capital investment. Initial equipment cost will be Rs.1.75 crores. Additional equipment cost Rs.12,50,000 will be purchased at the end of the third year from the cash inflow of this year. At the end of 8 years, the original equipment will have no resale value, but additional equipment can be sold for Rs.1,25,000. A Working Capital of Rs.20,00,000 will be needed and it will be released at the end of eighth year. The project will be financed with sufficient amount of Equity Capital.

The sales volumes over eight years have been estimated as follows:

Year	1	2	3	4-5	6-8
Units	72,000	1,08,000	2,60,000	2,70,000	1,80,000

A sales price of Rs.120 per unit is expected and variable expenses will amount to 60% of sales revenue. Fixed Cash operating costs will amount Rs.18,00,000 per year. The loss of any year will be set off form the profits of subsequent two years. The company is subject to 30 per cent tax rate and consider 12 per cent to be an appropriate after tax cost of Capital for this project. The company follows straight line method of depreciation.

Required:

Calculate the net present value of the project and advise the management to take appropriate decision

Note

The PV factors at 12% are

Year	1	2	3	4	5	6	7	8
	893	797	712	636	567	507	452	404

(8 marks)

8. Answer any three of the following:

(i) Explain the assumptions of Net Operating lncome approach (NOI) theory of capital structure.

(ii) Explain the limitations of profit maximization objective of Financial Management.

(iii) Explain the methods of venture capital financing.

(iv) Z Ltd.'s operating income (before interest and tax) is Rs. 9,00,000. The firm's cost of debts is 10 per cent and currently firm employs Rs. 30.00,000 of debts.

Required:

Calculate cost of equity. (3X3 = 9 marks)

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