**Cost Accounting and Financial Management**

Test Paper—I/8/CAFM/2012/T-1

**Time Allowed-3hours** **Full Marks-100**

**Part A-Cost Accounting (60 Marks)**

**Attempt Question No-1 which is compulsory and any three from the rest**

**Question 1**

A. Match items of column A with items in column B from the following [1x5=5marks]

| Column A | Column B |
|---|---|
| CAS 6 | Cost of production for captive consumption |
| CAS 8 | Classification of cost |
| CAS 12 | Material cost |
| CAS I | Cost of utilities |
| CAS 4 | Repair and maintenance |

B. In the following cases one out of four answers is correct. You are required to indicate the correct answer [1X4=4marks]

(i) The allotment of whole item of cost to a cost centre or cost unit is called as:

(a) Cost allocation;
(b) Cost apportionment;
(c) Overhead absorption;
(d) Cost classification.

(ii) The valuation of Closing Stock according to Last in First Out method of pricing is done at:

(a) The latest prices;
(b) The earliest prices;
(c) At average prices;
(d) None of the above.

(iii) The cost of obsolete inventory acquired several years ago, to be considered in a keep vs. disposal decision is an example of:

(a) Uncontrollable cost
(b) Sunk cost
(c) Avoidable cost
(d) Opportunity cost

(iv) Which of the following is not a avoidable cause of labour turnover?

(a) Dissatisfaction with the job.
(b) Dissatisfaction with the working hours.
(c) Change of locality
(d) Relationship with the colleagues.

C. State whether the following statements are true or false [1X5=5marks]

(i) ABC Analysis is made on the basis of unit prices of materials.
(ii) Opportunity Cost is the value of benefit sacrificed in favor of an alternative course of action.
(iii) Bin cards show quantity and value of stores.
(iv) Variable Cost varies with time.
(v) Is an expense can be identified with a specific cost unit, it is treated as Direct Expense

D. Define [2x2=4 marks]

(i) Perpetual Inventory System
(ii) Chargeable Expenses

**Question 2**

(a) A company has the option to procure a particular materials from two sources:
Source 1 assures that defectives will not be more than 2% of supplied quantity.
Source 2 does not give any assurance but on the basis of past experience of supplies received from it, it is observed that defective percentage is 2.8%.
The material is supplied in lots of 1000 units. Source 2 supplies the lot at a price, which is lower by ₹100 as compare to source 1. The defective units of materials can be rectified for use at a cost of ₹5 per unit.
You are required to find out which of the two sources is more economical. [7 marks]

(b) The standards hours of job X is 100 hrs. The job has been completed by Amar in 60 hrs, Akbar in 70 hrs, and Alam in 95 hrs. The bonus system is applicable to the job is as follows:

| Percentage of time saved to time allowed | Bonus |
|---|---|
| Saving upto 10% | 10% of time saved |
| From 11% to 20% | 15% of time saved |
| From 21% to 40% | 20% of time saved |
| From 41% to 100% | 25% of time saved |

The rate of pay is ₹10 per hour. Calculate the total earnings of each worker and also the rate of earnings per hour. [7 marks]

**Question 3**

(a) What are the avoidable and unavoidable causes of labour turnover? [4 marks]

(b) The budgeted working conditions for a call center are as follows:
Normal working per week 42 hrs.
No. of machines 14
Normal weekly loss of hrs. on maintenance 5 hrs per machine.
No. of weeks works per year 48
Estimated annual overheads ₹1,24,320
Actual result in respect of a 4 week period are :
Overhead incurred ₹10,200
Machine hours produced 2000

On the basis of the above information you are required to calculate

1. The machine hour rate.
2. The amount of under or over absorption of overhead [10 marks]

**Question 4**

(a) A company buys in lot of 125 boxes which is a 3 months' supply. The cost per boxes ₹125 and the ordering cost is ₹250 per order. The inventory carrying cost is estimated at 20% of unit value per annum.
You are required to ascertain
(i) What is the total annual cost of the existing inventory policy?
(ii) How much money would be saved by employing the economic order quantity (EOQ)?
[8 marks]

(b) Compute the machine hour rate from the following data:
Royalty paid on Sales-₹40,000;
Royalty paid on units produced ₹25,000
Hire Charges for equipment used for production-₹2,000
Design Charges-₹18,000
Software Development Charges use for production-₹22,000

Compute Direct Expenses following CAS 10. (6 marks)

**Question 5**

(a) Distinguish between allocation and apportionment of overhead. [5 marks]

(b) Short Notes: [3 x 3=9marks]

(i) Imputed cost
(ii) Uniform costing
(iii) Cost of utilities

**Part B-Financial Management (40 Marks)**

**Attempt Question No-6 which is compulsory and any two from the rest**

**Question 6**

A. In the following cases one out of four answers is correct. You are required to indicate the correct answer (1mark) and give your reason for answer (1 mark) [2x4=8 marks]

(i) The degree of operating leverage and degree of financial leverage of V Ltd are 2 and 1.5 respectively. What will be the percentage of change in EPS,IF the sale increases by 10%.

(a) 10% increase
(b) 15% increase
(c) 30% increase
(d) Insufficient Information

(ii)Two firms P Ltd and M Ltd are similar in all respect s except that Maruti Ltd uses ₹10,00,000debt in its capital structure. If the corporate tax rate for these firms is 40%,the value of M ltd exceeds that of P Ltd by

(a) ₹4,00,000
(b) ₹6,00,000
(c) ₹6,20,000
(d) ₹7,00,000

(iii)R ltd has an ROA of 10% and a profit margin of 2%.The company's total asset turnover is

(a) 3%
(b) 45
(c) 5%
(d) 6%

(iv) A firm has sales of ₹75,00,000 variable cost of ₹42,00,000 and fixed cost of ₹6,00,000.It has a debt of ₹45,00,000 at 9% interest and equity of ₹55,00,000. At what level of sales, the EBIT of the firm will be equal to zero?

(a) ₹28,48,500
(b) ₹28,84,500
(c) ₹22,84,500
(d) ₹26,48,500

B. Define [2X2=4marks]

(i) Break Even Point
(ii)Debt Service Coverage Ratio

**Question 7**

(a) From the following data compute the duration of the operating cycle for each year.

| Particulars | Year 1 | Year 2 |
|---|---|---|
| Stock | | |
| Raw materials | 20,000 | 27,000 |
| Work in progress | 14,000 | 18,000 |
| Finished goods | 21,000 | 24,000 |
| Purchase | 96,000 | 1,35,000 |
| Cost of goods sold | 1,40,000 | 1,80,000 |
| Sales | 1,60,000 | 2,00,000 |
| Debtors | 32,000 | 50,000 |
| Creditors | 16,000 | 18,000 |

Assume 360 days per year for computational purposes. [8 marks]

(b) S ltd. is marketing all its products through a network of dealers. All sales are on credit and the dealers are given one month time to settle bills. The company is thinking of changing the credit period with a view to increase its overall profits. The marketing department has prepared the following estimates for different periods of credit.

| Particulars | Present Policy | Plan 1 | Plan 2 | Plan 3 |
|---|---|---|---|---|
| Credit period in months | 1 | 1.5 | 2 | 3 |
| Sales in Lakhs | 120 | 130 | 150 | 180 |
| Fixed cost in lakhs | 30 | 30 | 35 | 40 |
| Bad debts % of sales | 0.5 | 0.8 | 1 | 2 |

The company has a contribution / sales ratio of 40%, further it required a pre tax return on investment at 20%. Evaluate each of the above proposals and recommend the best credit periods for the company. [6 marks]

**Question 8**

(a) Assuming no taxes and given the Earning before interest and taxes (EBIT), Interest (I), and Equity capitalization rate ($K_e$) below, calculate the total market value of each firm under net income approach.

| Firms | EBIT | I | $K_e$ |
|---|---|---|---|
| | ₹ | ₹ | |
| X | 2,00,000 | 20,000 | 12% |
| Y | 3,00,000 | 60,000 | 16% |
| Z | 5,00,000 | 2,00,000 | 15% |
| W | 6,00,000 | 2,40,000 | 18% |

Also determine the weighted average cost of capital for each firm. [8 marks]

(b)

(i) Find out operating leverage from the following data [3 marks]

| | |
|---|---|
| Sales | ₹50,000 |
| Variable Cost | 60% |
| Fixed cost | ₹12,000 |

(ii) Find out the financial leverage from the following data. [3 marks]

| | |
|---|---|
| Net worth | ₹25,00,000 |
| Debt / Equity | 3:1 |
| Interest Rate | 12% |
| Operating profit | ₹20,00,000 |

**Question 9**

(a) X Ltd. has 8 lakhs equity shares outstanding at the beginning of the year 2011. The current market price per share is ₹120. The Board of Directors of the company is contemplating ₹6.4 per share as dividend. The rate of capitalization, appropriate to the risk class to which the company belong is 9.6%.

Based on M – M approach, calculate the market price of the share of the company, when the dividend is a declared, b not declared. [6 marks]

(b) Short Notes: [4x2=8marks]

(i) Factoring
(ii) Price Earnings ratio and its significance.

**Cost Accounting and Financial Management**

**Test Paper—I/8/CAFM/2012/T-2**

**Time Allowed-3hours** **Full Marks-100**

**Part A- Cost Accounting (60 Marks)**

**Attempt Question No-1 which is compulsory and any three from the rest**

**Question 1**

A. Match items of column A with items in column B from the following : [1x4=4marks]

| Column A | Column B |
|---|---|
| CAS-4 | Cost Accounting Standard on Cost of Service Cost Centre |
| CAS-7 | Cost Accounting Standard on Selling and Distribution Overheads |
| CAS-13 | Cost Accounting Standard on Employee Cost |
| CAS-15 | Cost Accounting Standard on Cost of Production for Captive Consumption |

B. In the following cases one out of four answers is correct. You are required to indicate the correct answer : [1x4=4marks]

(i) Conversion cost is equal to the total of
 (a) Material Cost and direct wages
 (b) Material Cost and indirect wages
 (c) Direct wages and factory overhead
 (d) Material cost and factory overhead

(ii) Which of the following is an accounting record?
 (a) Bill of Material
 (b) Bin Card
 (c) Stores Ledger
 (d) All of these

(iii) Cost Accounting concepts include all of the following except
 (a) Planning
 (b) Controlling
 (c) profit sharing
 (d) product costing

(iv) A cost which increases or decreases per unit when volume of output increases or decreases is
 (a) Fixed cost
 (b) Variable cost
 (c) Direct cost
 (d) Indirect cost

C. Fill up the blank with appropriate words : [1x5=5marks]
 (i) Wages under Halsey Plan and Rowan Plan are exactly equal when time saved is Nil or it is ------------% of standard time.
 (ii) The technical term for charging of overheads to cost units is known as -----------.
 (iii) Reorder level = -------------------- .

(iv) Cost sheet is a document which provides for assembly of the detailed cost of a -----------

(v) The technical term for charging of overheads to cost units is known as ---------- .

D. Explain the following terms in two lines : [1x5=5marks]

(i) Sunk cost
(ii) Profit centre
(iii) Cost Allocation
(iv) Pre-determined overhead rate
(v) Normal Capacity

**Question 2**

(a) The books of Adarsh Manufacturing Company present the following data for the month of April, 2012.
Direct labour cost ₹17,500 being 175% of works overheads.
Cost of goods sold excluding administrative expenses ₹56,000.

Inventory accounts showed the following opening and closing balance:

| | April 1 | April 30 |
|---|---|---|
| | ₹ | ₹ |
| Raw materials | 8,000 | 10,600 |
| Works in progress | 10,500 | 14,500 |
| Finished goods | 17,600 | 19,000 |

| Other data are : | ₹ |
|---|---|
| Selling expenses | 3,500 |
| General and administration expenses | 2,500 |
| Sales for the month | 75,000 |

You are required to:

(i) Compute the value of materials purchased

(ii) Prepare a cost statement showing the various elements of cost and also the profit earned. [7marks]

(b) A factory has 3 production departments (P1, P2, P3) and 2 service departments (S1 & S2). The following overheads & other information are extracted from the books for the month of January 2012.

| Expense | Amount (₹) |
|---|---|
| Rent | 6,000 |
| Repair | 3,600 |
| Depreciation | 2,700 |
| Lighting | 600 |
| Supervision | 9,000 |
| Fire Insurance for stock | 3,000 |
| ESI contribution | 900 |
| Power | 5,400 |

| Particulars | P1 | P2 | P3 | S1 | S2 |
|---|---|---|---|---|---|
| Area sq ft | 400 | 300 | 270 | 150 | 80 |
| No. of workers | 54 | 48 | 36 | 24 | 18 |
| Wages | 18,000 | 15,000 | 12,000 | 9,000 | 6,000 |
| Value of plant | 72,000 | 54,000 | 48,000 | 6,000 | |
| Stock value | 45,000 | 27,000 | 18,000 | | |
| Horse power of plant | 600 | 400 | 300 | 150 | 50 |

Allocate or apportion the overheads among the various departments on suitable basis.

[7marks]

**Question 3**

(a) Two workmen, Vishnu and Shiva, produce the same product using the same material. Their normal wage rate is also the same. Vishnu is paid bonus according to the Rowan system, while Shiva is paid bonus according to the Halsey system. The time allowed to make the product is 100 hours. Vishnu takes 60 hours while Shiva takes 80 hours to complete the product. The factory overhead rate is ₹10 per man-hour actually worked. The factory cost for the product for Vishnu is ₹7,280 and for Shiva it is ₹7,600.

You are required:

(i) to find the normal rate of wages;
(ii) to find the cost of materials ;
(iii) to prepare a statement comparing the factory cost of the products as made by the two workmen. [6marks]

(b) Distinguish between: [4x2=8marks]

(i) 'Cost centre' and 'Cost unit'
(ii) 'Bill of Materials' and 'Material Requisition Note'

**Question 4**

(a) Calculate:

(i) Value of raw materials consumed;
(ii) Total cost of production
(iii) Cost of goods sold and
(iv) The amount of profit from the following particulars:

| | | |
|---|---|---|
| OPENING STOCK: | | |
| Raw Materials | 5,000 | |
| Finished goods | 4,000 | |
| CLOSING STOCK: | | |
| Raw materials | 4,000 | |
| Finished goods | 5,000 | |
| Raw materials purchased | | 50,000 |
| Wages paid to laborers | | 20,000 |
| Chargeable expenses | | 2,000 |
| Rent, rates & taxes | | 5,000 |
| Power | | 2,000 |
| Factory heating and lighting | | 2,000 |
| Factory insurance | | 1,000 |

| | |
|---|---|
| Experimental expenses | 500 |
| Wastage of material | 200 |
| Office management salaries | 4,000 |
| Office printing and stationery | 200 |
| Salaries of sales men | 2,000 |
| Commission of travelling agents | 1,000 |
| Sales | 1,00,000 |

[8marks]

(b) A workman takes 9 hours to complete a job on daily wages and 6 hours on a scheme of payment by results. His hourly rate is 25 p. The Material cost of the product is ₹4 and factory overheads are recovered at 150% of the total direct wages. Calculate the factory cost of the product under:

(i) Time rate system
(ii) Halsey Plan
(iii) Rowan Plan. [6marks]

**Question 5**

(a) List down any eight factors that you will consider before installing a costing system. [8marks]

(b) Write short notes on: [3x2=6marks]

(i) Controllable and Uncontrollable cost.
(ii) Techniques of costing.
(iii) VED analysis.

**Part B-Financial Management (40 Marks)**

**Attempt Question No-6 which is compulsory and any two from the rest**

**Question 6**

A. In the following cases one out of four answers is correct. You are required to indicate the correct answer (1mark) and give your reason for answer (1mark) [2x4=8 marks]

(i) The average daily sales of a company are ₹5 lakhs. The company normally keeps a cash balance of ₹80,000. If the weighted operating cycle of the company is 45 days, its working capital will be
(a) ₹112.9 lakhs (b) ₹113.3 lakhs
(c) ₹5.8 lakhs (d) ₹225.8 lakhs

(ii) According to the second method of lending by a bank as per Tandon committee suggestion, the maximum permissible bank borrowing – based on the following information is:
Total current assets ₹40,000; Current assets other than bank borrowings ₹10,000; Core current assets ₹5,000.
(a) ₹22,500 (b) ₹20,000
(c) ₹16,250 (d) ₹8,500

(iii) ABC Ltd. Is selling its products on credit basis and its customers are associated with 5% credit risk. The annual turnover is expected at ₹5,00,000 if credit is extended with cost of sales at 75% of sale value. The cost of capital of the company is 15%. The net profit of the company is :
(a) ₹1,25,000 (b) ₹77,670
(c) ₹88,430 (d) ₹1,10,500

(iv) A company has obtained quotes from two different manufacturers for an equipment. The details are as follows :

| Product | Cost (₹Million) | Estimated life (years) |
|---|---|---|
| Make X | 4.50 | 10 |
| Make Y | 6.00 | 15 |

Ignoring operation and maintenance cost, which one would be cheaper?
The company's cost of capital is 10%.
[Given : PVIFA (10%, 10 years) = 6.1446 and PVIFA (10%, 15 years) = 7.6061]
(a) Make X will be cheaper (b) Make Y will be cheaper
(c) Cost will be the same (d) None of the above

B. Define [2X2=4 marks]

(i) Gross working capital
(ii) Working capital gap.

**Question 7**

(a) Electronics Devices Ltd. sells goods to domestic market on a gross profit of 25% on sales without considering depreciation. Its estimates for the next year are as follows :

Amount (₹ lakh)

<u>Sales :</u>
Domestic market at 2 months' credit 1,600
Export selling price 10% below home price (Exports at 3 months' credit) 540

<u>Costs :</u>
Material used (Supplied extend 2 months' credit) 600
Wages paid (½ month in arrear) 400
Manufacturing expenses (paid 1 month in arrear) 600
Sales promotion (payable quarterly in advance 80
Administration expenses (paid 1 month in arrear) 200

The company maintains one month's stock of each of raw material and finished goods. A cash balance of ₹20 lakh is also maintained.
You are required to work out the working capital requirement of the company. [8marks]

(b) A firm's sales, variable costs and fixed cost amount to ₹75,00,000, ₹42,00,000 and ₹6,00,000 respectively. It has borrowed ₹45,00,000 at 9 per cent and its equity capital totals ₹55,00,000.

(i) What is the firm's ROI?
(ii) Does it have favourable financial leverage?
(iii) If the firm belongs to an industry whose asset turnover is 3, does it have a high or low asset leverage?
(iv) What are the operating, financial and combined leverages of the firm?
(v) If the sales drop to ₹50,00,000, what will the new EBIT be?
(vi) At what level will the EBT of the firm equal to zero? [6marks]

**Question 8**

(a) The Balance Sheet of JK Limited as on 31st March, 2012 and 31st March, 2013 are given below:

Balance Sheet as on

(₹ '000')

| Liabilities | 31.03.12 | 31.03.13 | Assets | 31.03.12 | 31.03.13 |
|---|---|---|---|---|---|
| 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 | | 2,736 | 3,168 |
| Profit and Loss A/c | 288 | 360 | Investment | 480 | 384 |
| 9% Debenture | 960 | 672 | Cash | 210 | 312 |
| Current Liabilities | 576 | 624 | Other Current Assets | | |
| Proposed Dividend | 144 | 174 | (including Stock) | 1,134 | 1,272 |
| Provision for Tax | 432 | 408 | Preliminary Expenses | 96 | 48 |
| Unpaid Dividend | -- | 18 | | | |
| | 4,656 | 5,184 | | 4,656 | 5,184 |

Additional Information:

1. During the year 2005-2006, Fixed Assets with a book value of ₹2,40,000 (accumulated depreciation ₹84,000) was sold for ₹1,20,000.
2. Provided ₹4,20,000 as depreciation.
3. Some investments are sold at a profit of ₹48,000 and profit was credited to Capital Reserve.
4. 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 ₹2,59,200 as on 31.03.12. The stock as on 31.03.13 was correctly valued at ₹3,60,000.
5. It decided to write off Fixed Assets costing ₹60,000 on which depreciation amounting to ₹48,000 has been provided.
6. Debentures are redeemed at ₹105.

Required:

Prepare a Cash Flow Statement. [10 marks]

(b) The following information is available for ABC & Co.

| | |
|---|---|
| EBIT | ₹ 11,20,000 |
| Profit before Tax | 3,20,000 |
| Fixed costs | 7,00,000 |

Calculate % change in EPS if the sales are expected to increase by 5%. [4marks]

**Question 9**

(a) Cost of capital is used by a company as a minimum benchmark for its yield". —Comment.
Also enumerate the applications of cost of capital in managerial decisions [6marks]

(b) Short Notes: [4x2=8marks]

(iii) Operating or service lease

(iv) American Depository Receipt (ADR)

**Cost Accounting and Financial Management**

**Test Paper—I/8/CAFM/2012/T-3**

**Time Allowed-3hours** **Full Marks-100**

**Part A-Cost Accounting (60 Marks)**

**Attempt Question No-1 which is compulsory and any three from the rest**

**Question 1**

A. Match items of column A with items in column B from the following [1x5=5marks]

| Column A | Column B |
|---|---|
| CAS 7 | Determination of Average Cost of Transportation |
| CAS 9 | Capacity Determination |
| CAS 12 | Employee Cost |
| CAS 2 | Packing Material Cost |
| CAS 5 | Repair and maintenance |

B. In the following cases one out of four answers is correct. You are required to indicate the correct answer [1x4=4marks]

(i) One of the most important tools in cost planning is:
- (a) Direct cost
- (b) Cost Sheet
- (c) Budget
- (d) Marginal Costing.

(ii) A cost which increases or decreases per unit when volume of output increases or decreases is:
- (a) Fixed cost
- (b) Variable cost
- (c) Direct cost
- (d) Indirect cost

(iii) Costing Profit and Loss Account does not record the:
- (a) sale value of goods
- (b) balance of overhead adjustment account
- (c) balance of cost of sales account
- (d) balance of stores ledger control account

(iv) One important opposing factor in fixing the economic order quantity is:

- (a) Ordering cost
- (b) Variable cost
- (c) Fixed cost
- (d) Semi-variable cost

(C) State whether the following statements are true or false [1X4=4marks]
(i) Perpetual inventory system enables management to ascertain stock at any time without physical inventory being taken.
(ii) Purchase requisition is usually prepared by the storekeeper.
(iii) Weighted average method of pricing issue of materials involves adding all the different prices and dividing by the number of such prices.
(iv) Under the average price method of valuing material issues, a new issue price is determined after each purchase.

(D) Define [2.5x2=5marks]

(i) Blanket (Single) Overhead Rate
(ii) Idle capacity

**Question 2**

(a) Two components A and B are used as follows:

| | |
|---|---|
| Normal usage | =50 per week each |
| Re-order quantity | =A- 300; B-500 |
| Maximum usage | =75 per week each |
| Minimum usage | =25 per week each |
| Re-order period: | A - 4 to 6 weeks; B - 2 to 4 weeks |

Calculate for each component
(a) Re-order level; (b) Minimum level; (c) Maximum level; (d) Average stock level.
Comment briefly on the difference in levels for the two components. [8marks]

(b) The following information relates to the activities of a production department of factory for a certain period:

| | |
|---|---|
| Material used | ₹36,000 |
| Direct Wages | ₹30,000 |
| Labour hours | 12,000 Hrs |
| Hours of Machinery-operation | 20,000 Hrs |
| Overhead Chargeable to the Dept | ₹25,000 |

On one order carried out in the department during the period the relevant data were:

| | |
|---|---|
| Material used | ₹6,000 |
| Direct Wages | ₹4,950 |
| Labour hours worked | 1,650 Hrs |
| Machine Hours | 1,200 Hrs |

Calculate the overheads chargeable to the job by four commonly used methods. [6marks]

**Question 3**

(a) State briefly the methods of segregating semi-variable cost into fixed and variable. [5marks]

(b) In a manufacturing concern bonus to workers is paid on a slab rate based on cost savings towards labour and overheads. The following are the slab rates:

Upto 10% saving 5% of the earning
Upto 15% Saving 9% of the earning
Upto 20% Saving 13% of the earning
Upto 30% Saving 21% of the earning
Upto 40% Saving 28% of the earning
Above 40% Saving 32% of the earning

The wage rate per hour of workers - P, Q, R and S are respectively ₹1.00 ,₹1.10 , ₹1.20 and ₹1.40. Overheads is recovered on direct wages at the rate of 200%. Standard cost under wages and overhead per unit of production is fixed at ₹30. The workers have completed one unit each in 8, 7, 5 ½ and 5 hours respectively. Calculate in respect of each worker:

a) Amount of bonus earned b) Total earnings; c) Total earnings per hour. [9marks]

**Question 4**

(a) The following figures were extracted from the trial balance of a company as on 31st December 2012.

| Particulars | Debit ₹ | Credit ₹ |
|---|---|---|
| Inventories<br>Raw Material<br>WIP<br>FG | <br>1,40,000<br>2,00,000<br>80,000 | |
| Office Appliances | 17,400 | |
| Plant and Machinery | 4,60,500 | |
| Buildings | 2,00,000 | |
| Sales | | 7,68,000 |
| Sales Returns | 14,000 | |
| Material purchased | 3,20,000 | |
| Freight on materials | 16,000 | |
| Purchase returns | | 4,800 |
| Direct labour | 1,60,000 | |
| Indirect labour | 18,000 | |
| Factory supervision | 10,000 | |
| Factory repairs & upkeep | 14,000 | |
| Heat, light & power | 65,000 | |
| Rates & taxes | 6,300 | |
| Misc factory expenses | 18,700 | |
| Sales commission | 33,600 | |
| Sales travelling | 11,000 | |
| Sales Promotion | 22,500 | |
| Distribution department salaries & wages | 18,000 | |
| Office salaries | 8,600 | |
| Interest on borrowed funds | 2,000 | |

Further details are given as follows:

a. Closing inventories are Material ₹180000, WIP ₹192000 & FG ₹115000.

b. Accrued expenses are direct labour ₹8000, indirect labour ₹1200 & interest ₹2000.

c. Depreciation should be provided as 5% on Office Appliances, 10% on machinery and 4% on Buildings.

d. Heat, light and power are to be distributed in the ratio of 8:1:1 among factory, office and distribution respectively

e. Rates & taxes apply as 2/3rd to the factory and 1/3rd to office

f. Depreciation on building to be distributed in the ratio of 8:1:1 among factory, office and distribution respectively

Prepare a cost sheet showing all important components. [8marks]

(b) The budgeted working conditions for a cost centre are as follows :

Normal working per week 42 hours

Number of machines 14
Normal weekly loss of hours on maintenance 5 hours per machine
Number of weeks works per year 48
Estimated annual overheads ₹1,24,320
Actual result in respect of a 4 week period are:
Overhead incurred ₹10,200
Machine hours produced 2,000
On the basis of the above information you are required to calculate:
(i) The machine hour rate.
(ii) The amount of under- or over-absorption of overhead. [6marks]

**Question 5**

(a) Describe briefly the role of the cost accountant in a manufacturing organization. [5marks]

(b) Short Notes: [3x3=9marks]

(i) Bin Card Vs. Stores Ledger
(ii) Merit Rating
(iii) Labour Turnover

**Part B-Financial Management (40 Marks)**

**Attempt Question No-6 which is compulsory and any two from the rest**

**Question 6**

A. In the following cases one out of four answers is correct. You are required to indicate the correct answer (1mark) and give your reason for answer (1 mark) [2x4=8 marks]

(i) Bidhan purchased a second hand machine for ₹8,000 on April, 2008 and spent ₹3,500 on overhauling and installation. Depreciation is written-off 10% p.a. on original cost. On June 30, 2011, the machine was found to be unsuitable and sold for ₹6,500. What is the loss to be written –off?

(a)₹1,265.80 (b)₹1,262.50
(c)₹1,309.80 (d)₹1,350.05

(ii) Based on the following information, what will be the amount of Inventory?
Current ratio=2.6: 1
Liquid ratio=1.5:1
Current liabilities= ₹40,000.

(a)₹55,000 (b)₹44,000
(c)₹22,000 (d)₹33, 000

(iii) The computed financial leverage based on the given data below
Net worth Rs. 25,00,000
Debt/Equity 3 : 1
Interest rate 12%
Operating profit ₹ 20,00,000, is

(a)2.43 (b)2.16 (c)1.82 (d)1.56

(iv) Durga Farm Supplies has an 8 per cent return on total assets of ₹3,00,000 and a net profit margin of 5 per cent. Its sales are then

(a)₹37,50,000 (b)₹4,80,000
(c)₹3,00,000 (d)₹15,00,000

B. Define [2X2=4 marks]

(i) Net working capital
(ii) Inventory control

**Question 7**

(a) A company is presently working with an earning before interest and taxes (EBIT) of ₹90 lakhs. Its present borrowings are:

| | (₹ Lacs) |
|---|---|
| 12.5% term loan | 300 |
| Working capital: | |
| Borrowing from Bank at 13% | 200 |
| Public deposit at 11.5% | 90 |

The sales of the company is growing and to support this, the company proposes to obtain additional borrowing of ₹100 lakhs expected to cost 15%. The increase in EBIT is expected to be 15%.
Calculate the change in interest coverage ratio after the additional borrowing and commitment. [6marks]

(b) The turnover of Bengal Polymers Limited is ₹60 lakhs of which 80% is on credit. Debtors are allowed one month to clear off the dues. A factor is willing to advance 90% of the bills raised on credit for a fee of 2% per month plus a commission of 4% on the total amount of debts. The company, as a result of this arrangement, is likely to save ₹21,600 annually in management costs and avoid bad debts at 1 % on the credit sales.
A scheduled bank has come forward to make an advance equal to 90% of the debts at interest rate of 18% per annum. However, its processing fee will be 2% on the debts.
Advise management of the company whether it should avail services of a factor or accept offer from the bank. [8marks]

**Question 8**

(a) The net Sales of W Ltd. is ₹45 crores. Earnings before interest and tax of the company as a percentage of net sales is 12%. The capital employed comprises ₹15 crores of equity, ₹3 crores of 12% Cumulative Preference Share Capital and 13% Debentures of ₹ 9 crores. Income-tax rate is 30%.

(i) Calculate the Return-on-equity for the company
(ii) Calculate the Operating Leverage of the company given that Combined Leverage is 4.5

[7marks]

(b) Bisk-Farm Biscuits Ltd is considering the purchase of a delivery van, and is evaluating the following two choices:

(i) The company can buy a used van for ₹20,000 and after 4 years sell the same for ₹2,500 (net of taxes) and replace it with another used van which is expected to cost ₹30,000 and has 6 years life with no terminating value,
(ii) The company can buy a new van for ₹40,000. The projected life of the van is 10 years and has an expected salvage value (net of taxes) of ₹5,000 at the end of 10 years.

The services provided by the vans under both the choices are the same. Assuming the cost of capital at 10 percent, which choice is preferable? [7marks]

**Question 9**

(a) Assuming no taxes and given the earnings before interest and taxes (EBIT), interest (I) at 10% and equity capitalisation rate ($K_e$) below, calculate the total market value of each firm under Net Income approach:

| Firms | EBIT | I | $K_e$ |
|---|---|---|---|
| | ₹ | ₹ | |
| X | 2,00,000 | 20,000 | 12.0% |
| Y | 3,00,000 | 60,000 | 16.0% |
| Z | 5,00,000 | 2,00,000 | 15.0% |
| W | 6,00,000 | 2,40,000 | 18.0% |

Also determine the weight average cost of capital for each firm. [8marks]

(b) Short Notes: [3x2=6marks]

(i) Capital Asset Pricing Model (CAPM)
(ii) Financial Leverage

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA
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**Cost Accounting and Financial Management**

**Test Paper—I/8/CAFM/2012/T-4**

**Time Allowed-3hours** **Full Marks-100**

**Part A-Cost Accounting (60 Marks)**

**Attempt Question No-1 which is compulsory and any three from the rest**

**Question 1**

A. Match items of column A with items in column B from the following [1x5=5marks]

| Column A | Column B |
|---|---|
| CAS 3 | Selling and Distribution overheads |
| CAS 10 | Pollution Control Cost |
| CAS 11 | Overheads |
| CAS 14 | Direct Expenses |
| CAS 15 | Administrative overhead |

B. In the following cases one out of four answers is correct. You are required to indicate the correct answer and give reason for answer [4x2=8marks]

(i) After inviting tenders for supply of raw materials, two quotations are received as follows— Supplier A ₹2.20 per unit, Supplier B ₹2.10 per unit plus ₹2,000 fixed charges irrespective of the units ordered. The order quantity for which the purchase price per unit will be the same

(a) 22,000 units (c) 20,000 units
(b) 21,000 units (d) None of the above.

(ii) Normal rate per hour for worker A in a factory is ₹5.40. Standard time per unit for the worker is one minute. Normal piece rate per unit for the worker is

(a) ₹ 0.90 (c) ₹ 0.11
(b) ₹ 0.09 (d) None of the above

(iii) The cost per unit of a product manufactured in a factory amounts to ₹160 (75% variable) when the production is 10,000 units. When production increases by 25%, the cost of production will be ₹--- per unit.

(a) ₹ 145 (c) ₹ 150
(b) ₹ 152 (d) ₹ 140

(iv) If minimum stock level and average stock level of a particular raw material are 4,000 and 9,000 units respectively, find out its recorder level

(a) 9,000 units (b) 10,000 units
(c) 4,000 units (d) 5,000 units.

(C) State whether the following statements are true or false [1X5=5marks]

(v) Cost Accounting is a branch of Financial Accounting.
(vi) Labour Turnover is the movement of people out of the organisation.
(vii) Bincard shows the value of a material at any movement of time.
(viii) In Cost Accounting, abnormal losses are transferred to Costing Profit and Loss A/c.
(ix) The success of the uniform costing is based on mutual belief and understanding.

**Question 2**

(a) A company manufactures a standard component. The details of current operations of the company are as follows :
Number of workers employed 100
Weekly working hours 48
Average number of hours lost due to idle time per employee per week 8
Standard time required per unit 2 hours
Hourly wage rate ₹15
Current level of efficiency 80%
For every unit sold the company is getting a cash profit of ₹120 before charging labour cost.
In view of the increased demand for the product, the company has come to an agreement with the labour union to raise the wage rate by ₹3 per hour in return for the workers reducing the idle time by 4 hours and raising the operational efficiency to 90%.
Calculate the

(i) Net Profit at current operations;
(ii) Net Profit after the agreement; and
(iii) Increase/decrease in Net Profit. [4+4+2=10marks]

(b) The following data are available in respect of material X for the year ended 31st March 2012.

| | ₹ |
|---|---|
| Opening stock | 90,000 |
| Purchases during the year | 2,70,000 |
| Closing stock | 1,10,000 |

Calculate –
(i) Inventory turnover ratio; and
(ii) The number of days for which the average inventory is held. [4marks]

**Question 3**

(a) Explain briefly to classification of overheads according to behavior. [4marks]

(b) Madhav has a small furniture factory and specializes in the manufacture of small tables of standard sizes of which he can make 30,000 a year, he made and sold 20,000 tables and his cost per table was ₹110, made up as under – i) Materials ₹60; ii) Labour ₹20 and iii) Overhead (Fixed) recovered at 50% of Material cost ₹30.
Prices are fixed by adding a standard margin of 15% to the total cost arrived at as above. For the current year, due to a fall in the cost of materials, total cost was determined at ₹95 per table as under – i) Materials ₹50; ii) Labour ₹20 and iii) Overhead (Fixed) recovered at 50% of Material cost ₹25.
Madhav maintained his standard margin at 10% of his total cost of sale. Sales were at the same level as in the previous year. You are required to –

(i) Determine profit and loss for the current year.
(ii) Compute the price that should have been charged in the current year to yield the same profit as in previous year. [10marks]

**Question 4**

(a) M/s XY Ltd. are the manufacturers of picture tubes for T.V. The following are the details of their operation during 2011:

Average monthly market demand 2,000 Tubes
Ordering cost ₹100 per order
Inventory carrying cost 20% per annum
Cost of tubes ₹500 per tube
Normal usage 100 tubes per week
Minimum usage 50 tubes per week
Maximum usage 200 tubes per week
Lead time to supply 6-8 weeks

Compute from the above:

(1) Economic Order Quantity. If the supplier is willing to supply quarterly 1,500 units at a discount of 5%, is it worth accepting?
(2) Maximum level of stock
(3) Minimum level of stock
(4) Reorder level [8marks]

(b) From the following particulars given below compute Machine hour rate for a machine.

(i) Cost ₹ 24,000
(ii) Scrap value ₹ 4,000
(iii) Estimated Working life 40,000 hours.
(iv) Estimated cost of repairs and maintenance during the whole life ₹ 2,000.
(v) Standard charges of the shop for 4 weekly period ₹ 3,000.
(vi) Working hours in 4 weekly period 100 hours.
(vii) No. of machines in the shop each of which is liable for equal change are 30 machines.
(viii) Power used per hour 4 units @ 10p. per unit. [6marks]

**Question 5**

(a) Difference between Cost Control and Cost Reduction [8marks]

(b)Short Notes: [3x2=6marks]

(i) Bin Card Vs. Stores Ledger
(ii) Merit Rating
(iii) Labour Turnover

**Part B-Financial Management (40 Marks)**

**Attempt Question No-6 which is compulsory and any two from the rest**

**Question 6**

A. In the following cases one out of four answers is correct. You are required to indicate the correct answer (1mark) and give your reason for answer (1 mark) [2x4=8 marks]

(i) A Limited is presently selling 1,00,000 units of its products. The selling price per unit is ₹25 and variable cost per unit is ₹15. The fixed cost is ₹5,00,000. The financial breakeven point for the company is ₹1,50,000. What will be the percentage change in EBIT required to increase EPS by 20%?
(a)10% (b)12% (c)14% (d)20%

(ii) The capital structure of a company is as under:

3,00,000 Equity Shares of ₹10 each,
32,000, 12% Preference Shares of ₹100 each,
General Reserve ₹15,00,000,
Securities Premium Account ₹5,00,000,
25,000, 14% Fully Secured Debentures of ₹100 each,
Term Loan of ₹13,00,000.
Based on these, the leverage of the company is

(a)60.22% (b)58.33%
(c)55.21% (d)62.10%.

(iii) The average daily sales of a company are ₹5 lac. The company normally keeps a cash balance of ₹80000.If the weighted operating cycle of the company is 45 days, its working capital will be:

(a)₹112.9 lac (b) ₹113.3 lac
(c) ₹5.8 lac (d) ₹225.8 lac.

(iv) Basic objective of Financial Management is:

(a)maximization of shareholder's wealth;
(b)maximization of profits.
(c)arrangement of financial resources.
(d)efficient utilization of funds.

B. Define [2X2=4 marks]

(i) Return on Equity
(ii)Financial Lease

**Question 7**

(a) The Balance Sheets of A, B, & C Co. Ltd. as at the end of 2011 and 2012 are given below:

| LIABILITIES | 2011(₹) | 2012(₹) | ASSETS | 2011(₹) | 2012(₹) |
|---|---|---|---|---|---|
| Share Capital | 1,00,000 | 1,50,000 | Freehold land | 1,00,000 | 1,00,000 |
| Share premium | - | 5,000 | Plant at cost | 1,04,000 | 1,00,000 |
| General Reserve | 50,000 | 60,000 | Furniture at cost | 7,000 | 9,000 |
| Profit & Loss Account | 10,000 | 17,000 | Investments | 60,000 | 80,000 |
| 6% Debentures | 70,000 | 50,000 | Debtors | 30,000 | 70,000 |
| Provision for Depreciation on Plant | 50,000 | 56,000 | Stock | 60,000 | 65,000 |
| Provision for Dep. on Furniture | 5,000 | 6,000 | Cash | 30,000 | 45,000 |
| Provision for taxation | 20,000 | 30,000 | | | |
| Sundry Creditors | 86,000 | 95,000 | | | |

| | | | | |
|---|---|---|---|---|
| | 3,91,000 | 4,69,000 | 3,91,000 | 4,69,000 |

A plant purchased for ₹4,000 (Depreciation ₹2,000) was sold for cash for ₹800 on September 30, 2012. On June 30, 2012 an item of furniture was purchased for ₹2,000. These were the only transactions concerning fixed assets during 2012. A dividend of 22½ % on original shares was paid. You are required to prepare funds flow statement and verify the results by preparing a schedule of changes in working Capital. [8marks]

(b) Bombay Cotton Mills Limited Ltd. makes a rights issue at ₹5 a share of one new share for every four shares held. Before the issue, there were 10 million shares outstanding and the share price was ₹6. Based on the above information you are required to compute-

a. The total amount of new money raised.
b. How many value of one rights are required to buy one new share?
c. What is the value of one right?
d. What is the prospective ex-rights price? [1.5x4=6marks]

**Question 8**

(a) A company has a profit margin of 20% and asset turnover of 3 times. What is the company's return on investment? How will this return on investment vary if?
Profit margin is increased by 5%?
Asset turnover is decreased to 2 times?
Profit margin is decreased by 5% and asset turnover is increase to 4 times? [6marks]

(b) Surya Industries Ltd. is marketing all its products through a network of dealers. All sales are on credit and the dealers are given one month time to settle bills. The company is thinking of changing the credit period with a view to increase its overall profits. The marketing department has prepared the following estimates for different periods of credit:

| **Particulars** | | **Present Policy** | **Plan I** | **Plan II** | **Plan III** |
|---|---|---|---|---|---|
| Credit period | (in months) | 1 | 1.5 | 2 | 3 |
| Sales | (₹ Lakhs) | 120 | 130 | 150 | 180 |
| Fixed costs | (₹ Lakhs) | 30 | 30 | 35 | 40 |
| Bad debts | (% of sales) | 0.5 | 0.8 | 1 | 2 |

The company has a contribution/sales ratio of 40% further it requires a pre-tax return on investment at 20%. Evaluate each of the above proposals and recommend the best credit period for the company. [8marks]

**Question 9**

(a) With the help of the following information complete the Balance Sheet of MNOP Ltd.

| | | |
|---|---|---|
| Equity share capital | ₹1,00,000 | |
| The relevant ratios of the company are as follows: | | |
| Current debt to total debt | 40 | |
| Total debt to owner's equity | 60 | |
| Fixed assets to owner's equity | 60 | |
| Total assets turnover | 2 Times | |
| Inventory turnover | 8 Times | [8marks] |

(b) Short Notes: [3x2=6marks]

(v) Venture Capital
(vi) Securitisation