INTERMEDIATE EXAMINATION

June 2014

P–8(CAFM)
Syllabus 2012

Cost Accounting and Financial Management

Time Allowed: 3 Hours

Full Marks: 100

The figures in the margin on the right side indicate full marks.

SECTION A - Cost Accounting (60 marks)

In Section A, *Question No. 1* is compulsory. Answer *any three* out of the remaining *four*.

(Working notes should form part of the answers. Wherever necessary suitable assumptions may be made and disclosed by way of note)

1. Answer the following:

(a) The annual demand for an item is 3200 units. The unit cost is ₹ 6 and the inventory carrying cost is 25% per annum. If the cost of one procurement is ₹ 150, determine the time between two consecutive orders, assuming procurement is at EOQ. 2

(b) Calculate the direct expenses as per CAS-10 from the following information:
Royalty paid on sales: ₹ 1,25,000; Royalty paid on production: ₹ 1,00,000; Design charges ₹ 26,000; Machine shop expenses ₹ 45,000; Software development charges related to production: ₹ 55,000; 2

(c) In a certain week, the time allowed to a worker for Job X was 48 hours. He took 30 hours for the job. If the hourly effective rate of earnings of the worker under Rowan Plan is ₹ 55, find the normal hourly rate of wages. 2

(d) The following information is given:
The total number of operators working in a Department = 300.
The number of working days per year = 300 and the number of hours per day = 8.
The total Departmental overhead is ₹ 3,42,000. 5% of the total number of days is normal idle time.
Find the overhead rate per direct labour hour. 2

(e) How should packing costs be treated in Cost Accounts? 2

(f) The opening stock, closing stock and purchases of materials were respectively 10,000, 16,000 and 84,000 during a production period. Compute the inventory turnover ratio. 2

2. (a) The machine shop of a factory offers the following information about a particular machine:
Cost of the machine: ₹ 20,00,000; Salvage value: ₹ 80,000; Life of the machine: 10 years..
Assume straight-line depreciation on net value over the life of the machine.
Cost of repairs and maintenance- ₹ 28,000 per annum.
Electric power used by the machine is 15 units per hour at ₹ 8.5 per unit. No power is consumed during maintenance and set-up time. A chemical costing ₹ 8,250 per packet is used for operating the machine every month. The wages of the operator are ₹ 1,32,000 per annum. The operator devotes one third of his time to this machine. Annual insurance charges are 1% of the cost of the machine. Cost of lighting the department is ₹ 15,000 per month. There are 72 points of which only 12 lighting points are used by this machine. Other indirect charges chargeable to this machine are ₹ 13,000 per month. Annual working hour are 3000. The machine requires a set-up time of 156 hours per annum which are to be considered productive time. The machine requires 400 hours per annum for repairs and maintenance.
You are required to calculate the machine hour rate. 8

Please Turn Over

(b) A plant that manufactures tiffin boxes has an installed capacity of 1,20,000 units per year distributed evenly over each calendar month. The following is the cost structure of the product:

Raw Material	₹ 20 per unit
Direct Labour	₹ 12 per unit
Direct Expenses	₹ 2 per unit
Variable overheads	₹ 16 per unit
Fixed overhead	₹ 3,00,000 per annum (i.e ₹ 1,50,000 per half year)

Semi-variable overheads: ₹ 7500 per month up to 50% capacity and an additional ₹ 2500 per month for every additional 25% capacity utilization or part thereof.

The plant will operate at 50% capacity during the first 6 months of the calendar year 2014 and at 100% capacity in the remaining months.

The selling price for the period from 1st January to 30th June was fixed at ₹ 70 per unit. The firm wishes to revise the selling price for the next half year, which should be fixed effective 1st July to achieve a total profit of ₹ 9,00,000 during 2014.

You may assume that whatever is produced is sold and that the market is likely to absorb the production after the revision in price.

You are required to prepare a statement showing the element wise total cost and profit for each half year and the revised selling price in the second half of the year to achieve the overall annual profit of ₹ 9,00,000 in 2014. Compute the semi-variable and fixed cost per unit for each of the half yearly periods. 8

3. (a) The standard overhead rate for a department is ₹ 3.60 per hour and the overhead allowances are as follows:

Activity level (hours)	Budgeted overhead allowances (₹)
3000	14000
7000	22000
11000	30000

Calculate the standard activity level at which the standard overhead rate has been worked out. 4

(b) P. Ltd., a manufacturing company, made the following purchases of raw materials from different suppliers. Information pertaining to each material is given below:

Material	Quantity as per invoice	Rate ** per unit	Other information
A	2000 kg	₹ 12	VAT 4%; Quantity discount = 2%; Cash discount for payment within 30 days = 5% Delivered to store at supplier's cost.
B	3000 kg	₹ 20	No VAT; Normal loss = 6% of the quantity during transport. Insurance ₹ 6000; Freight ₹ 2 per kg.
C	1000 nos	45 US $	Imported from US. Import duty 24% of invoice value. Insurance and freight at supplier's cost. Exchange rate at purchase date = ₹ 60 per US $ Exchange rate at payment date = ₹ 63 per US $
D	4000 kg	₹ 30	No VAT; No insurance. Normal loss 3% of the quantity accepted. Abnormal loss 2% reimbursed by transporter to the extent of ₹ 1500
** rate means rate as per supplier's price list before any discount or taxes.			

Applying the Cost Accounting Standards for Material Cost, calculate the value and quantity at which each material receipt will be recorded. 9

(c) Name 3 factors that should be disclosed in the cost statements as per CAS-3. 3

4. (a) The standard capacity usage and the actual capacity utilization in respect of a machine for a particular month are 90% of total available hours and 80% of standard capacity usage respectively. The total available working time in the month is 200 hours. The following data is obtained from the idle time card:

Time in waiting for material (normal) = 10 hours
Time in waiting for tools (normal) = 6 hours
Sudden break down = 10 hours.

The hourly fixed costs of the machine is ₹ 43 and the operator is paid at ₹ 70 per hour.

You are required to report the idle time cost to the management. 8

(b) Briefly explain the following: 8

(i) Practical capacity
(ii) Normal Capacity
(iii) Idle Capacity
(iv) Excess Capacity

5. (a) The following information pertains to a production department of a manufacturing company:

Particulars	₹	₹ Per hour
Indirect wages		40
Repairs: up to 2000 hours For each additional 500 hours up to a total of 4000 hours Additional amount for 4001 to 5000 hours Additional amount beyond 5000 hours	10000 3500 6000 7000	
Rent and Rates	35000	
Power: up to 3,600 hours Above 3600 hours		25 30
Consumable supplies		24
Depreciation up to 100% of budgeted activity. Beyond this level, 10% increase for every 10% increase in activity or part thereof.	65000	
Cleaning and Lighting Up to 4000 hours Above 4000 hours	18000 2300	

The budgeted level of activity is 5000 hours in a production period

Prepare the overhead budget with the break-up of each item of cost given above for activity levels at 70% and 110% of the budgeted volume. Compare the budgeted overhead rate per hour and the overhead rates per hour at the above levels. Comment on these rates. 8

(b) 200 kg of a certain material valued at ₹ 50 per kg were issued from the Stores Department to the Production Department, During transit, 2 kg physically disappeared due to shrinkage (1% shrinkage is considered normal). In the production process, the yield of good output was 80% of the input. 8% of the input had a slightly sub standard dimension and this can be sold as seconds in the market at a discount of 25% of the selling price of good output, which is ₹ 300 per kg. 12% of the input emerged as trimmings in the process. This was collected and can be sold in the market at a net price of ₹ 20 per kg. which is credited to the manufacturing overhead as per the company's practice.

Explain with reasons, the quantities that you will classify as (i) waste, (ii) scrap and (iii) spoilage.

What will be the material cost per unit of the good output? (A simply computed value will suffice. A detailed statement is not required) 8

SECTION B - Financial Management (40 marks)

In Section B, *Question No. 6* is compulsory. Answer *any two* out of the remaining *three*.

6. Answer the following, showing the workings for each. (No credit will be given for answers without the reasoning)

(a) X deposits ₹ 1,00,000 at the beginning of each of years 1 and 3, and ₹ 1,00,000 at the end of each of the years 2, 4 and 5. Find the discounted value of the investments at the end of year 3 with a discount rate of 10%.

(P.V. factor of 10% at the year end 0, 1, 2, 3, 4, 5 and 6 are respectively: 1, 0.909, 0.826, 0.751, 0.683, 0.621, 0.564) 2

(b) Cost of debt is 9% after tax. Cost of equity is 12% at zero leverage and it keeps increasing as leverage grows. Find the weighted average cost of capital at 60% debt proportion under the Net Operating Income Approach. 2

(c) The earnings of a company = ₹ 5,00,000. Dividend pay out ratio is 60%. The number of shares outstanding = 1,50,000. Equity capitalization rate = 11% and rate of return on investment = 16%. Calculate the market value of the share as per Walter's model. 2

(d) Will the following items feature in the cash flow statements as per AS-3? If so, state the category under which the item will be shown.

(i) Cash paid to develop self constructed fixed asset.

(ii) Acquisition of another entity by issue of shares.

(iii) Conversion of debt to equity. 2

7. (a) The following details relating to a company are given:

Sales per annum	1,00,000 units
Variable Cost	₹ 90 per unit
Fixed Cost including interest per annum	₹ 18,00,000
P/V ratio	25%
10% Debentures	₹ 30,00,000
Equity Share capital (shares of ₹ 10 each)	₹ 40,00,000
Corporate Tax Rate	30%

Calculate:

(i) Operating Leverage

(ii) Financial Leverage

(iii) Combined Leverage

(iv) Earnings per share 8

(b) Write short note on Global Depository Receipts. 4

(c) A chemical company has a net sales of ₹ 50 crores, cash expenses (including taxes) of ₹ 35 crores, and depreciation of ₹ 5 crores. If debtors decrease over the period by ₹ 6 crores, what will be the cash from operations? 2

(d) The balances of the Plant and M/c of A Ltd., on 31.03.2014 and 31.03.2013 were respectively ₹ 1,00,000 and ₹ 40,000. A machine with opening w.d.v. ₹ 6000 was sold for ₹ 5000 during the year 2013-14. Depreciation of ₹ 5000 was charged during the year. Find the amount that will feature as 'application of funds' in the Fund Flow Statement. 2

8. (a) The following information relates to N Ltd. for the year ending 31.03.2014:

Fixed Assets to sales ratio	2:1
Current ratio	2.5:1
Liquidity ratio	1.4:1
Debtors' turnover	12 times
Debt (long-term)-equity ratio	1:2
Current assets to fixed assets ratio	1:3
Working capital	₹ 15,00,000

Assume all sales are on credit.

Calculate the following:

(i) Current Assets

(ii) Total Assets

(iii) Sales

(iv) Debtors

(v) Inventory

(vi) Networth

(vii) Long-term debt

(viii) Cash and Bank balance 8

(b) Information on two projects is given below:

Project.....	A	B
Cash Inflows (₹ '000) year-end		
1	50	282
2	300	250
3	360	180
4	208	Nil
Initial Investment - beginning of year 1	535	540

Evaluate which project is better under each of the following criteria taking discount rate as 10% p.a.

(i) NPV

(ii) Discounted Pay Back period

(iii) Profitability Index

(Discount factors given in question 6) 8

9. (a) Z Ltd's cost sheet gives you the following information:

Items of Cost/Revenue	₹/unit
Raw Material Cost	117
Direct Labour	49
Factory Overheads (includes depreciation at ₹ 18 per unit at budgeted level of activity)	98
Total Cost per unit	264
Profit	36
Selling Price per unit	300

The following information is also available:

Average raw material in stock	4 weeks
Average Work-in-progress stock (Material 80% complete, Labour and overheads - 60% complete)	2 weeks
Credit period allowed to debtors	6 weeks
Credit availed from suppliers	8 weeks
Time lag in payment of wages	1 week
Time lag in payment of overheads	2 weeks

The company sells one-fifth of its output against cash and the remaining is credit sale. Cash balance is maintained at ₹ 2,50,000. Budgeted level of activity is 78,000 units. Production, wages and overheads may be taken as

being carried out evenly throughout the year. Debtors may be valued at sales value.

Prepare a statement showing the item wise break up of the total working capital requirement needed to finance the budgeted level of activity. 8

(b) Answer *any two* of the following:

(i) Write a short note on the theory of net income approach relating to capital structure. 4

(ii) What are the distinctive features of a financial lease and an operating lease? 4

(iii) What is debt-service coverage ratio? Explain its significance. 4