INTERMEDIATE EXAMINATION

June 2017

P–8(CAFM)
Syllabus 2012

Cost Accounting and Financial Management

Time Allowed: 3 Hours | Full Marks: 100

The figures on the right margin indicate full marks.
All sections are compulsory. Each section contains instructions regarding the number of questions to be answered within the section.
All working notes must form part of the answers.
Wherever necessary, candidates may make appropriate assumptions and clearly state them.
No present value factor table or other statistical table will be provided in addition to this question paper.

Section A

Question 1 is compulsory. Answer *all* questions under each sub division.

1. (I) Answer the following questions. Each question carries two marks. 2×5=10

(i) Daily consumption of a material is 64 to 80 units. It takes 30 to 40 days for receipt of material after initiating the order and re-order quantity is 4000 units. Calculate the maximum stock level if the re-order level is 3200 units.

(ii) P Ltd. issues 1000000,12% debentures of ₹ 100 each at a premium of 20 per cent. The debentures are redeemable after the expiry of a fixed period of 10 years at 40 per cent premium. Calculate the cost of debt after tax if corporate tax rate is 30%.

(iii) A worker has produced 144 units in place of 120 units in 10 hours and normal wage rate is ₹ 75 per hour. Find his total earnings under Rowan Plan.

(iv) The risk free rate of return is 10%, market rate of return is 12.25 % and beta (β) = 1.25. Find the cost of equity using CAPM method.

(v) There were 5000 workers in a factory on 1st April, 2016. New entrants in service during the year 2016-17 were 250 and separations were 130. Calculate Labour Turnover Rate using Flux method.

Please Turn Over

(II) State whether the following are True or False (Write only the question Roman numeral and whether True or False). 1×5=5

(vi) Danger Level of inventory should be fixed below the minimum level.

(vii) When the output level is more than the estimated level in a given production period, there is an over absorption of overheads.

(viii) A firm's WIP inventory will not have any element of allocated administration overhead.

(ix) As per Walter's Model of Dividend Policy the firm should retain its earnings if the rate on internal retention is higher than the capitalisation rate.

(x) If a project's annual cash flows have positive and negative signs, there will certainly be multiple internal rates of return.

(III) Fill in the blanks (Legibly write only the Roman numeral and the content filling the blank): 1×5=5

(xi) When raw material is accounted at standard cost, variances due to normal reasons will be treated as __________cost (give the element of cost).

(xii) Cost of idle time (idle hours × hourly rate) incurred by a worker directly working on a product is treated as________________ (give the element of cost).

(xiii) Royalty payable based on the right to sell is treated as _________ (give the element of cost).

(xiv) The discount rate used for determining NPV of a project under capital budgeting is at least the ________.

(xv) Modigliani-Miller theory states that ________ is independent of the firm's dividend policy.

(IV) Match the following (You may opt to write the Roman numeral and the matched alphabet instead of copying the contents into the answer books): 1×5=5

(xvi)	EOQ	A	Direct Labour
(xvii)	Sunk Cost	B	Inventory management
(xviii)	Direct worker's contribution to PF	C	Ignores value of money

(xix)	Profitability Index	D	Measures the profitability of an investment proposal
(xx)	Market price per share at the end of year 1 is	E	Excluded from Cost
		F	Cost of alternative resources
		G	Minimum ordering cost
		H	Managerial decision making
		I	Ignores project life
		J	Dividend at year 2 end / (K_e - g)
		K	Dividend at year 1 end /(K_c - g)

Section B

Answer *any three* questions from question numbers 2, 3, 4 and 5.

Each question carries 15 marks.

2. (a) The following information is provided by GA Ltd. for the year ended 31st March, 2017:

Production and Sales: 20,000 units

	₹
Direct Material	30,00,000
Direct Wages	22,50,000
Factory Overhead	20,62,500
Office and Administration Overheads	8,50,000
Selling and Distribution Overheads	2,50,000
Sales	100,95,000

The following estimates have been made for the year 2017-18:

(i) Production and sales will be 30,000 units.

(ii) Material prices per unit will increase by 25% but due to economy in consumption there will be a saving of 12% on the revised value.

(iii) The wage rate per unit will increase by 20%.

(iv) Factory overheads of ₹ 7,50,000 are fixed. The remaining factory overheads will be in the same proportion to materials consumed plus wages as in last year.

(v) The Office and Administrative overheads will increase by 20%.

(vi) Selling and Distribution overheads per unit will be reduced by 20%.

(vii) Percentage of profit on cost desired = 5% plus rate of profit on cost in the last year.

You are required to prepare a statement showing total cost and profit both in value (to the nearest rupee) and on per unit basis for the year 2017-18. Present costs element wise and with sub totals usually exhibited in a cost sheet 10

(b) P. Ltd. Produces products P-I and P-II. The following information is furnished:

Particulars	Product P-I	Product P-II
Opening Stock (Tonnes)	25,000	21,000
Sales (Tonnes)	4,15,000	3,10,000
Closing Stock (Tonnes)	32,000	28,000
Machine Hours Utilised (Hours)	10,000	6,000
Design Charges (₹)	10,80,000	6,50,000
Software development charges (₹)	16,50,000	9,00,000

Royalty is paid on units produced @ ₹ 20 per tonne for both the products. Wages are paid to machine operators @ ₹ 75 per machine hour. Hire charges of equipment used in manufacturing process of only product P-II ₹ 6,15,000.

You are required to calculate the direct expenses of PI and PII as per CAS. 5

3. (a) The following information given:

Workers engaged	:	WX and WY
Standard time allowed for Job	:	40 hours to each
Actual time taken	:	32 hours by WX and 30 hours by WY
Wages rate	:	same for both
Wages payment system	:	Halsey 50% plan for WX and Rowan plan for WY
Factory overhead recovered	:	@ ₹ 180 per hour for time taken in both cases.
Factory cost for each of the worker	:	₹ 62,400

Calculate the hourly wages rate and cost of material used.

Assume zero direct expenses. 7

(b) A company having three production cost centres A, B and C and two service cost centres X and Y reports the following data on overhead allocation costs for a certain period:

Cost Centres	Overhead Costs (₹)	Estimates of benefits received from Service cost centres (%)	
		X	Y
A	80,000	20	20
B	40,000	30	25
C	20,000	40	50
X	20,000	-	5
Y	10,000	10	-

Determine the total overhead costs of C after apportioning the service centre costs using (i) Simultaneous Equations Method and (ii) Repeated Distribution method. Comment on your findings. Explain the concept. (Present your calculations to the nearest rupee). 8

4. (a) Two quotations have been shortlisted in a material procurement process. Supplier A charges ₹ 2.3 per unit and Supplier B charges ₹ 2.10 per unit plus ₹ 4000 fixed charges irrespective of the order quantity.

(i) Compute the order quantity at which the purchase value will be the same for both the suppliers.

(ii) If the order quantity is 15,000 units, which supplier should be chosen? 4

(b) State three characteristics of ''imputed cost''. Give an example. 4

(c) What are the adjustments made to the installed capacity to arrive at the practical capacity? 4

(d) State the uses of CAS 5 in determining the average cost of transportation of materials. 3

5. (a) The following information relates to the activities of a production department of M Limited for the month of April, 2017:

(i)	Material Costs	₹	15,00,000
(ii)	Employee Costs	₹	6,72,000
(iii)	Direct Expenses	₹	42,000
(iv)	Other Fixed Costs	₹	8,40,000
(v)	Direct Labour hours		21,000 hours
(vi)	Hours of machinery operation		4000 hours

You are required to prepare a statement showing the break-up of element wise cost (as per CAS) of the items given above for the entire department and for the order detailed below based on the following additional information:

(iv) above consists of 80% as machine related expenses and 10% as administration and 10% as marketing expenses.

On one order carried out in the department during April, 2017 the relevant data were:

Material used: 10% of total material; labour hours worked 163 hours; Machine hours: 51 hours.

Use (A) machine hour rate of overhead absorption (B) Direct labour hour rate of overhead absorption for factory overheads and prime cost basis for other overheads and determine the cost of the order under A and B. 6

(b) Group the following items as per the CAS applicable under the most appropriate element of cost or as specific exclusions. Find the total cost of direct materials. The information pertains to a company manufacturing processed foods.

Sl. No.	Item Description	Amount (₹)
(i)	Material purchased: Flour at invoice price	50,000
(ii)	Transport Cost of flour to the factory	2,000
(iii)	Penalty paid to Transport Authority	700
(iv)	Free Samples	950
(v)	Materials used for self-made primary packing material	5,000
(vi)	Direct Labour used on the above packing material	3,000
(vii)	Factory Overheads on the above packing material	1,000
(viii)	Invoice price of dyes purchased for the production shop	1,100
(ix)	Inward Transport cost of Dye	200
(x)	Salary paid to machine worker	2,100

(xi)	Salary paid to billing officer who raises invoices	2,200
(xii)	Wages paid to a machine worker during idle time	300
(xiii)	Price List/Catalogue cost	5,400
(xiv)	Cost of cartons used to pack the packets to despatch to retail outlets	3,300
(xv)	Direct worker's contribution of Employees' Provident Fund	225
(xvi)	Taste stimulant and preservative added during the process (approximate value; quantity not measurable during each process)	900

(Your need not copy the item description into the answer book. You may indicate under each element, the Roman numeral and the corresponding amount) 9

Section C

Answer ***any two*** questions from question numbers 6,7 and 8.

Each question carries 15 marks

6. (a) Using the following data, find as many items as possible to prepare the Balance Sheet as at the end of the year:

Gross profits	₹ 5,40,000
Shareholders Funds	₹ 40,00,000
Gross Profit Margin	30%
Credit Sales to Total Sales	80%
Total Assets Turnover Ratio (based on Sales Value)	0.3 times
Inventory Turnover Ratio (Based on cost)	4 times
Average collection period (360 days in a year)	20 days
Current ratio	1.8
Long-term Debt to Equity	40%

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(b) Identify whether the following items are inflows or outflows and place them under appropriate categories in the cash flow statement under AS-3: 5

Item Description	Inflow	Outflow	Category
Normal income tax refund			
Proceeds of a share issue			
Interest received by a financial enterprise			
Decrease in debtors			
Dividend received by a manufacturing company			

7. (a) The following data is provided by S Limited.

Sales ₹ 40,00,000; Variable Cost is 60% of Sales; Fixed Cost ₹ 10,00,000; Interest on Borrowings ₹ 1,50,000 in addition to the fixed costs.

Using the concept of leverage, answer the following:

(i) By what percentage will the taxable income increase if EBIT increases by 6%?

(ii) By what percentage will EBIT increase if there is 10% increase in sales?

(iii) By what percentage will the taxable income increase if the sales increase by 6%?

Verify your results. 8

(b) A firm is considering pushing up its sales by extending credit facilities to any one of the following categories of customers: (i) Customers with a 10% risk of non-payment, and (ii) Customers with a 25% risk of non-payment. The incremental sales expected in category (i) is ₹ 2,40,000 and in category (ii) is ₹ 6,50,000. The cost of production and selling costs are 60% of sales while the collection costs amount to 5% of sales in case of category (i) and 10% of sales in case of category (ii).

You are required to advise the firm about extending credit facilities to each of the above categories of customers. (Use sale value for bad debts). 7

8. (a) R Ltd. Has the following book-value capital structure as on 31st March, 2017:

(₹ in Crores)

12% Debentures of ₹ 100 each 10% Preference shares of ₹ 100 each Equity shares of ₹ 10 each	20 5 25
Total	50

Recent market prices of the securities are:

Debentures: ₹ 115 per debenture;

Preference shares: ₹ 140 per share; and

Equity shares: ₹ 48 per share

External financing opportunities are:

(i) 12% Debentures are redeemable at par after 10 years, its flotation cost is 4% and sale price is ₹ 100.

(ii) 10% Preference shares are redeemable at par after 10 years, its flotation cost is 5% and sale price is ₹ 100.

(iii) Equity shares: ₹ 4 per share is flotation cost, sale price is ₹ 44.

The dividend expected on the equity share at the end of the year is ₹ 4 per share; the anticipated growth rate in dividends is 7% p.a. and the company has the practice of paying all its earnings in the form of dividend. The corporate tax rate is 30%.

You are required to calculate the weighted average cost of capital using (i) Book value weights and (ii) Market Value weights 10

(b) The following data relating to a project are provided by the Management of G Ltd:

Annual saving	₹ 4,20,000
Useful life	4 years
Profitability Index	1.04291
Internal rate of Return	14%
Salvage Value	Nil

Assume that the only outflow is at the beginning of year 1.

Find (i) Net Present Value (to the nearest rupee) and (ii) Cost of Capital (as a % up to one decimal point) 5

Table Showing Present Values of ₹ 1 at different discount rates: (You are required to use PV factors only up to three decimals as shown below)

End of Year \ Rate	14%	13%	12%	11%
1	0.877	0.885	0.893	0.901
2	0.769	0.783	0.797	0.812
3	0.675	0.693	0.712	0.731
4	0.592	0.613	0.636	0.659
Total	2.913	2.974	3.038	3.103