

INTERMEDIATE EXAMINATION

December 2016

**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 No.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) The average quarterly consumption of a material is 5200 units. Unit cost is ₹ 65. Storage cost is 15% p.a. and the ordering cost is ₹ 150 per order. Find the Economic Order Quantity (EOQ).
 - (ii) At the level of 60,000 units of output, factory overheads were ₹ 3,75,000 out of which 40% was fixed. Find the amount of factory overheads at 78,000 units of output.
 - (iii) Standard Time allowed = 3 minutes per unit. Normal time rate = ₹ 30 per hour; Taylor's differential piece rate basis: 80% and 120% for below and above standard respectively. Worker W produces 225 units in an eight hour day. Calculate his earnings for the day.

Please Turn Over

(iv) Classify the following items under the appropriate heading as per AS 3 in the cash flow statement:

- (a) Repayment of long term borrowings
- (b) Dividend paid
- (c) Dividend received
- (d) Income-tax paid on trading profits

(v) Total Current Assets = Rs. 700 lacs of which core is ₹ 180 lacs; Current Liabilities excluding bank borrowings = 300 lacs.

What would be the maximum permissible bank borrowing as per Methods II and III of the Tandon Committee Norms?

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

- (vi) While working out the EOQ, carrying cost has the element of interest cost. Hence it can be stated that interest cost is treated as part of material cost under CAS—6.
- (vii) Normal bad debt is considered as a selling overhead and included in the cost.
- (viii) Carriage and Cartage expenses (inward freight) of fuel for a furnace in a factory is treated as direct material cost.
- (ix) If dividends grow at 'g' % p.a. and cost of equity is k_e , the current market price of a share is determined by a geometric progression with common ratio $(1 + g)/(1 + k_e)$.
- (x) The MM Hypothesis assumes that the overall cost of capital is independent of the capital structure.

(III) Fill in the blanks (Write only the Roman Numeral and the content filling the blank): 1×5=5

- (xi) Variable overheads are absorbed by products based on _____ level of capacity utilization.

- (xii) In a textile factory, yarn is starched before it is made into textile. The cost of starch is _____ (give the element of cost).
- (xiii) The actual capacity of a manufacturing unit based on temporary sales expectancy is 10,000 units due to lack of orders. The practical capacity is 11,500 units. Then, 1500 units is _____ capacity.
- (xiv) The ratio of % change in one variable to the % change in some other variable is defined as _____ in the context of capital structure and finance.
- (xv) *E* is an exporter who relinquishes his right to a receivable due at a future date in exchange for immediate cash payment at an agreed discount, passing on all the risks and responsibilities for collecting the debt to *B*. This arrangement is called _____.

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

(xvi)	Cash inventory	(a)	Baumol Model
(xvii)	Halsey Plan	(b)	Dividend Discount Model
(xviii)	John Burr Williams	(c)	Waste Reduction Incentive
(xix)	Group Bonus Plan	(d)	Based on $33\frac{1}{3}\%$ of time saved
(xx)	Rowan Plan	(e)	Indirect Labour Cost
		(f)	Based on time saved
		(g)	Based on proportion of time saved to time allowed

Please Turn Over

Section B

Answer any three questions from question numbers 2, 3, 4 and 5.
Each question carries fifteen marks.

2. (a) The following information is available relating to raw material movement in the month of November, 2016:

Date (November 2016)	Details of quantities in number of units
1	Opening stock 500 at ₹ 200 per unit
3rd to 5th	Issue of 250 units
13th	Received 200 units @ ₹ 190
14th	Returned to Stores 15 units issued earlier to November at opening stock rate
16th	Issue of 250 units
20th	Receipt of 240 units @ ₹ 195
24th	Issue of 290 units

You are required to compute the inventory turnover ratio for the month of November, 2016 using

(i) FIFO and (ii) LIFO methods of pricing and comment on your findings. (A detailed stores ledger account is not required. Only relevant figures for the ratio need to be computed). 10

- (b) A factory has three production departments—P-1, P-2 and P-3 and two service departments—S-1 and S-2. Overheads are allocated in rupees as follows:

P-1 1,50,000; P-2 75,000; P-3 60,000
S-1 1,05,300; S-2 1,35,000

The expenses of the service departments are charged as follows:

	P-1	P-2	P-3	S-1	S-2
S-1	20%	40%	30%	—	10%
S-2	40%	20%	20%	20%	—

Find out the total overheads of Departments S-1 and S-2 including their charges on each other by the simultaneous equation method. Calculate the total overheads of P-2. 5

3. (a) APH, A Publishing House publishes Cost Accounting text books. The following are some expenses in a certain period:

Sl. No.	Details	Amount ₹
(i)	Amount paid to employees for proofing and editing	50,000
(ii)	Amount paid to professional consultants for proofing	20,000
(iii)	Hire charges for special binding equipment	40,000
(iv)	Salary paid to the press machinery workmen	1,00,000
(v)	Subsidy received from an Accounting Body to encourage such work	15,000
(vi)	Inward freight of paper for publishing	10,000
(vii)	Penalty paid to a Business School, a major customer, for not releasing the books on time when the academic year started.	25,000
(viii)	Cost of ink used in publishing	30,000
(ix)	Royalty on sales	70,000
(x)	Payment made in foreign currency for purchase of special paper for cover page: (100 US \$ @ ₹68 per US \$)	

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You are required to present the items that would be considered under the element "Direct Expenses" for publishing and also list the items that would require disclosure according to CAS—10.

You are also required to state why and under which element of cost you would account for items that you have not shown under Direct Expenses.

(You may present the Sl. No. and amount columns without copying "Details" column content into your answer book) 10

(b) Classify the following costs according to function and under the appropriate element of cost in the context of a jute bag manufacturing unit:

- (i) Nuts and Bolts
- (ii) Commission on sales
- (iii) Printing and Stationery
- (iv) Product Catalogue
- (v) Secondary packing material used in the delivery van. 5

4. (a) The following information is available in respect of some employees of Good Pay Ltd. for the production period consisting of 12 months:

Worker X is a direct labourer in the shop floor. Z is his supervisor, AO is the Administrative Officer and MO is the Marketing Officer.

LTA (₹) for X, Z, AO, MO are : 15,000; 20,000; 30,000; 40,000 respectively.

Night Shift Allowances (₹) paid to X and Z due to general pressure: 1,60,000 and 1,80,000 respectively.

Night Shift Allowance (₹) (excluding the above) due to special customer demand for rush delivery (paid to X and Z): 50,000 each.

Special exhibition arrangements entailing extra work: amount paid to MO: ₹ 1,20,000.

Fringe Benefits paid to each of X, M, AO and MO: ₹ 40,000.

Attendance Bonus: ₹ 25,000 each.

Employer's contribution to PF: same as amounts under LTA.

Lost time due to scheduled maintenance—amount paid to X ₹ 15,500.

Amount paid to X when he did not work due to severe and unexpected machine break down ₹ 25,000.

Prepare a statement showing the amounts that would come under Direct Labour, Production Overhead, Administrative Overheads and Selling Overheads according to the principles of Cost Accounting Standards. 10

(b) How will you treat the following in Cost Accounts?

(i) Spoiled Work

(ii) Insurance Charges on Plant and Machinery used for production, on finished goods in transit and on vehicles used by the Accounts Office? 5

5. (a) A machine shop has 6 identical machines manned by 6 operators. The machines cannot be worked without an operator being wholly engaged on it. The original cost of all these six machines is totally ₹ 8 lakhs. The following particulars are furnished for a six month period:

Normal available hours per month per operator	208
Absenteeism (without pay)-hours per operator	18
Leave with pay-hours per operator	20
Normal idle time unavoidable-hours per operator	10
Average rate of wages per day of 8 hours per operator	₹ 24
Production Bonus estimated	15% on wages

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Value of power consumed	₹ 8,050
Supervision and indirect labour	₹ 3,300
Lighting and Electricity	₹ 1,200

The following particulars are for a year:

Repairs and maintenance including consumable are 3% on value of machines.

Insurance ₹ 40,000.

Depreciation is 10% on original cost. Assume no solvage value.

Other sundry works expenses ₹ 12,000.

General management expenses allocated ₹ 54,530.

You are required to work out a comprehensive machine hour rate for the machine shop.

(Present items of expenses for six months and arrive at the machine hour rate at the final step).10

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

Normal usage	600 units	per week each
Maximum usage	900 units	per week each
Minimum usage	300 units	per week each
Reorder quantity	A 4,800 units	B 7,200 units
Reorder period	A 4 to 6 weeks	B 2 to 4 weeks

Calculate for each component:

- (i) Re-order level,
- (ii) Minimum level,
- (iii) Maximum level,
- (iv) Average stock (Based on Re-order quantity)

Section C

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

Each question carries fifteen marks.

6. (a) Companies X, Y and Z Ltd. have the following information with a common expectation of 15% return on investment.

Details	X Ltd.	Y Ltd.	Z Ltd.
EBIT (₹)	20,00,000	20,00,000	20,00,000
No. of equity shares	3,00,000	2,50,000	2,50,000
12% Debentures	—	15,00,000	18,00,000

Find the value of each firm and the value per equity share for each firm under the Modigliani-Miller Approach for each of the following situations: 10

- (i) Assuming there are no taxes.
(ii) Assuming 50% tax rate.
- (b) The following parameters are furnished relating to a firm as on a certain date:

Stock Turnover Ratio	6 times
Debtors	2 months (Sales value)
Gross Profit to Sales ratio	20%
Capital	1,00,000
Reserves and Surplus	20,000
Creditors Turnover ratio	5 times
Fixed Assets Turnover ratio	5 times
Closing Stock is ₹ 5,000 more in value than the opening stock and closing creditors were equal to the opening value.	
The Gross Profit during the period was ₹ 60,000 and there were no cash sales or purchases.	

Prepare the Balance Sheet as at that date giving the break-up of as many items as possible. 5

Please Turn Over

7. (a) A company is considering the purchase of a stapler manufacturing machine. Two mutually exclusive machines, A and B are being evaluated. Relevant information is given below:

Particulars	Machine A	Machine B
Cost of the machine (₹)	10,00,000	15,00,000
Life in years	5	5
Salvage value (₹)	20,000	40,000
Cost of production per stapler (excluding depreciation)	30	28

Other Information:

The staplers can be sold at ₹ 40 each. Depreciation is based on cost net of residual value over the life of the machines on a straight line basis. Assume that taxes and operating cash flows occur at the end of the year and that salvage value is also taxed at the end of the 5th year. Assume 50% tax rate. Use 12% discount rate and P.V. factors with decimal places as given. Present your calculations up to the nearest rupee.

Production volume = 1,00,000 units annually.

You are required to evaluate the proposals using NPV method, showing the discounted cash flows for each of the machines and advise from a financial perspective on the choice of a suitable alternative.

Do you feel that NPV would be the ideal measure in this case to take the decision?

10

End of year	1	2	3	4	5	6	7	8	9
P.V. factor @ 12%	0.893	0.797	0.712	0.636	0.567	0.507	0.452	0.404	0.361

- (b) What is a Financial Lease? What are its characteristic features?

5

8. (a) The following information is given:

Details	
Annual production	72,000 units
Raw Materials Inventory	2 months' consumption
Finished Goods Stock	3 months
Work-in-Progress (Raw Materials 100%; Conversion Costs 50% complete)	1 month;
Debtors	3 months (sales value)
Creditors	2 months
Cash balance required	1,00,000
Assume: Sales, production, costs are uniform throughout the cycle.	
Other information:	
Selling Price ₹/unit	120
Raw Material	60% of selling price
Direct Wages	20% of selling price
Overheads (assume no depreciation)	10% of selling price

You are required to estimate the working capital requirement with a detailed break up of its constituents.

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(b) The following information is available from the records of A Ltd.:

Profit after Tax	₹ 7,91,000
10% Debentures at par	₹ 25,00,000
Operating Leverage	1.80 times
Variable cost ratio	60%
Corporate Tax rate	30%

- (i) Prepare an Income Statement for A Ltd.
- (ii) Calculate the combined leverage for A Ltd.