INTERMEDIATE EXAMINATION

December, 2015 *P-8(CAFM)*
Syllabus 2012

Cost Accounting & Financial Management

Time Allowed: 3 Hours Full Marks: 100

The figures in the margin on the right side indicate full marks.
All questions are compulsory, subject to internal choices as per instruction provided against each question.
All workings must form part of the answers.
Wherever necessary, candidates may make suitable assumptions and clearly state them in the answer.
No present value factor table or other table will be provided along with this question paper.

I. Answer ***all*** sub-divisions: 2×10=20

(a) A worker has produced 154 units in 10 hours instead of 15 hours. If the normal wages rate is ₹ 30 per hour find his remuneration under Rowan Premium Plan.

(b) If current ratio is 2.4 : 1 and working capital is ₹ 25,20,000, find the amount of current assets and current liabilities.

(c) G Ltd. issues 20,000, 12% debentures of ₹ 100 each at premium of 10 per cent. The debentures are redeemable after the expiry of a fixed period of 10 years at 20 per cent premium. Calculate the cost of debt after 30% tax.

(d) Factory cost is ₹ 3,80,000 and cost of production is ₹ 4,10,000. Office and administrative overheads are 20% of factory overheads. What would be amount of prime cost? Assume no stock adjustments.

(e) State two main differences between scrap and spoilage.

(f) In the specimen cost sheet of a production centre, how would you arrive at the cost of sale from the prime cost?

(g) The M-M hypothesis on capital structure assumes a perfect capital market. State 4 features of such a market assumed by the hypothesis.

(h) A firm earns a contribution of ₹ 4,80,000. Its operating leverage and financial leverage are respectively 4 and 5. Find the firm's PAT if the effective tax rate is 25%.

(i) If a factory worked 3 shifts/day for 365 days it can produce 8,03,000 units.

52 Sundays during the year are holidays. There are 12 festival holidays. Breakdown of machine normally happens for 6 days. Labour shortage/Inventory taking etc. consume 8 days per annum. In the forthcoming year as well as in future, the market share of the company's product will be sufficient to demand only lesser quantities due to competition. Hence it is estimated that two shift working will be enough for the future. Determine the practical capacity and the normal capacity for the forthcoming year.

Please Turn Over

(j) An examination centre has many rooms. 800 students are allotted seats @ 50 students per room. Every room requires two invigilators at ₹ 2,000/- per invigilator.

Based on cost behaviour, under which type of cost will you classify the invigilator costs, if the cost object is (i) an individual student (ii) a batch of 50 students?

II. Answer *any **three** sub-divisions from (a) to (d)*: 16×3=48

(a) (1) A Ltd. was ordering (in economic order quantities) (EOQ) its raw material RM at a price of ₹ 750 per unit. The average annual consumption was 18000 units. Carrying cost was 20% of average inventory and the ordering cost was ₹ 1500 per order. A Ltd. wants to move towards the Just-In-Time system and the new policy proposes as follows: the average number of units held in stock will be 100 units; ordering cost per order will be ₹ 1510 ; carrying cost will be 20% of average inventory. However, the purchase price will increase. The total new ordering cost will be 9 times the new carrying cost.

(i) What was the EOQ before the new policy?

(ii) Calculate the inventory turnover ratio before and after the new policy.

(iii) How much is the increase in purchase price under the new policy? Compare the two policies regarding raw material management and offer your comments. 3+4+5=12

(2) In each of the following independent situations, state with a brief reason, the method of overhead absorption you would recommend as a Cost Accountant:

(i) Product: hand crafted statues for corporate gifts

	₹/unit
Material	360
Direct Labour	300
Direct Expenses	120
Selling price	1,000

(ii) Product: Mass – manufactured 10 mm bearings, produced by stamping machines. Bearings of varying sizes are mass-manufactured by the factory.

	₹/unit
Material	80
Direct Labour	15
Direct Expenses	20
Selling price	250

2+2=4

(b) PQ Ltd. wishes to use standard costing system to report variances to the Management.

The following data is given:

Nature of product: Single product PQ, an electronic component, produced by manual assembly of purchased parts.

The following persons are involved in production:

Category	*Details*
DW	Direct workers involved in the assembly.
PA	Production Assistants who are helpers in the shop floor.
SS	Supervisory staff in the production shop floor.
OS	Office staff exclusively meant for production.

Other Information	
Shift:	Single shift from 9-00 a.m. to 5-00 p.m.
Tea breaks:	15 minutes pre-lunch 15 minutes post-lunch
Lunch:	1 hour
Waiting time for spares, parts, etc.	2 hours / week (on an average 20 minutes/day)

Normally, according to past average, 5 units of PQ are finished by a direct worker during one shift.

The details for labour pay-outs are as follows:

	DW	PA	SS	OS
No. of persons	35	4	7	2
Basic pay	₹ 75/ hour	₹ 300/ shift	₹ 800/ shift	₹ 35,000/ month
Leave Travel Assistance (per annum per person)	₹ 10,000	₹ 8,000	₹ 20,000	₹ 25,000
Rates of pay on holidays (2 holidays per month other than Sundays)	₹ 100/ hour	₹ 500/ shift	₹ 1,000/ shift	₹ 2,000/ day
Attendance bonus for attendance of 80% or more no. of days. Flat rate ₹/person/month	2,000	1,500	3,000	4,000

The factory works on all holidays other than Sundays. Assume all the 52 Sundays are holidays and are weekly offs. 80% of the DW category get the attendance bonus, while in other categories, all the persons get the bonus.

(i) For the DW category, arrive at the standard labour cost per unit and the standard number of direct labour hours per unit of PQ to enable periodic reporting and corrective action by comparing variances.

(ii) What amounts, on an annual basis, as per cost Accounting Standards would you show under Direct Labour, Works Overhead, Administrative Overhead or charge directly to the P&L A/c?

(Show workings per week × 52 weeks per annum). 4+12=16

(c) (1) Kovid Ltd. has three production departments viz. A, B and C and two service departments viz. X and Y. Allocated overheads are follows:

	A	B	C	X	Y
Allocated overheads (₹)	2,50,000	85,000	1,75,000	1,35,000	1,65,000
Direct Labour Hours (Hours)	25,000	18,000	13,000	—	—

The expenses of the service departments are charged as follows:

		A	B	C	X	Y
Service Department:	X	20%	40%	30%	—	10%
	Y	30%	25%	25%	20%	—

(i) Determine the total overheads of the service departments after loading the inter-departmental exchange of services. by the simultaneous equation method.

(ii) Calculate the overhead to be charged to Job 211 which uses 25 hours in Production Department A. 4+3=7

(2) A medicinal herb is collected by tribal people from the forest regions. The Purchase Department staff of X Ltd. visit the tribals in the villages, purchase the herbs and transport the herbs to the factory. The herbs are cleaned, dried, powdered and machine-packed in 100 gm sachets and sold as a certain curative medicine.

Which of the following items of cost will be treated as a direct expense under CAS –10?

If a certain item is not classified as a direct expense, under what element will it get classified?

(i) Amount paid to the tribals.

(ii) The product is patented. The cost of the patents.

(iii) For every sachet sold, the tribal chief gets 5% as royalty. The amount of royalty.

(iv) A pharmaceutical consultant is paid to test the effectiveness of each batch of medicine processed. The fees so paid.

(v) Travel expenses of the Purchase Department personnel to the villages.

(vi) Transport cost from the villages to the factory.

(vii) Cost of the packing sachets.

(viii) Cost of the personnel working in the cleaning and drying processes. 4

(3) Milk is produced in a factory and packed in half litre sachets. 100 sachets are packed in each metallic reuseable container and the containers are transported to milk depots in airconditioned trucks, refrigerated in the depots and sold in retail. State the element of cost under which the factory has to classify the following items as per Cost Accountancy Standards.

(i) Cost of the sachets

(ii) Cost of the containers

(iii) Transportation costs

(iv) Refrigeration costs

(v) Depot's expenses—like rent, salary of staff etc.

(vi) Cost of advertising for the milk 3

(4) ₹ 3,000/- and ₹ 60,000/- are written off raw materials and finished goods respectively for obsolescence. How should these be treated in Cost Accounts? 2

(d) (1) What are the differences between Cost Control and Cost Reduction? 4

(2) What is meant by the following terms? Give an example of each in a situation where a factory makes use of the same production facility to make products A, B, C and D using the same raw material R.

(i) Opportunity cost

(ii) Relevant cost

(iii) Replacement cost 2×3=6

(3) Product B, with selling price of ₹ 600 per unit is the main product being produced by a factory. The factory uses componend 'A' in the manufacture of B. 'A' is produced in-house. The cost of producing one unit of A is as follows: Direct Material—₹ 120; Direct labour— ₹ 80; Direct expense—₹ 20;

Factory overheads: fixed—₹ 20; variable— ₹ 15; Administrative expenses:—relating to production—₹ 12;—relating to others— ₹ 5;

What is the amount relating to 'A' to be considered as material cost of B as per CAS–6? 3

(4) In a certian melting process, a material called 'coke' is put into the furnace along with other materials. Coke is also used as fuel to heat the furnace. How will you treat the cost of coke in the final product according to Cost Accounting Standards? 3

III. Answer *any **two** sub-divisions from (a) to (c)*: 16×2=32

(a) (1) The following accounting information and financial ratios of Bhalu Ltd. relate to the year ended 31st March, 2015:

Inventory Turnover Ratio (considering cost of goods sold)	6 times
Creditors Turnover Ratio	10 times
Debtors Turnover Ratio	12 times
Current Ratio	2.4
Gross Profit Ratio	25%

Total sales ₹ 60 lakhs; cash sales 25% of credit sales; cash purchases ₹ 4,60,000; working capital ₹ 7,14,000; closing inventory is ₹ 1,60,000 more than opening inventory.

You are required to calculate:

(i) Average Inventory
(ii) Purchases
(iii) Average Debtors
(iv) Average Creditors
(v) Average Payment Period
(vi) Average Collection Period
(vii) Current Assets
(viii) Current Liabilities 8

(2) A company has earnings of ₹ 5,00,000. The capital structure of the company has debt and equity in which debt of ₹ 8,00,000 is borrowed at 10%. The cost of equity capital is currently 12.5%. Calculate the value of the firm and overall cost of capital by the net income approach. Ignore taxes. Take market value of debt at par. 4

(3) Explain the concepts of operating leverage and financial leverage. 4

(b) (1) The following balances are provided by M Ltd. for the years ended 31st March, 2014 and 2015:

Particulars	31.03.2014 ₹	31.03.2015 ₹
General Reserve	2,40,000	2,90,000
Profit & Loss A/c	4,20,000	6,00,000
11% Debentures	10,00,000	6,00,000
Goodwill	2,00,000	1,60,000
Land & Building	14,00,000	13,00,000
Plant & Machinery	12,00,000	13,20,000
Investment (Non trading)	4,80,000	4,40,000
Creditors	3,70,000	4,30,000
Provision for tax	1,60,000	2,10,000
Proposed Dividend	2,72,000	2,88,000
Stock	8,00,000	7,70,000
Debtors	5,76,000	8,30,000
Cash at Bank	1,76,000	1,86,000
Prepaid Expenses	30,000	22,000

Additional Information:

1. Investment were sold during the year for ₹ 70,000.
2. During the year an old machine costing ₹ 1,60,000 was sold for ₹ 72,000. Its written down value was ₹ 90,000.
3. Depreciation was charged on plant and machinery @ 20% on the opening balance.
4. There was no purchase or sale of land and building during the year.
5. Provision for tax made during the year was ₹ 1,92,000.
6. During the year premium on redemption of debentures written-off was ₹ 40,000.

You are required to prepare a statement showing the net cash flow from operating activities. 8

(2) (i) Following are the details regarding two companies A Ltd. and B Ltd.:

Details	A. Ltd.	B Ltd.
Internal Rate of Return	15%	5%
Cost of equity capital	10%	10%
Earnings per share	₹ 8	₹ 8

Calculate the value of an equity share of each of these companies according to Walter's model when dividend payout ratio is 75%

What should be each company's strategy to maximize the market value of its share? 4

(3) Write a short note on the Dividend Irrelevance Theory of Modigliani and Miller. 4

(c) (1) S. Ltd. produces a product with the following revenue-cost structure:

	₹ per unit
Raw Material	115
Direct labour	80
Overheads	37
Total cost	**232**
Profit	58
Selling Price	290

The following additional information is available:

(i) Average raw materials in stock: one month

(ii) Average work in-process: half-a-month—Raw Materials 100%, Direct labour 50%, Overheads 50% complete

(iii) Average finished goods in stock: one month

(iv) Credit allowed by suppliers: one month

(v) Credit allowed to debtors: two months

(vi) Time lag in payment of wages: half-a-month

(vii) Overheads: one month

(viii) One-fourth of sales are on cash basis

(ix) Cash balance is expected to be ₹ 1,65,000

You are required to prepare a statement showing the Working Capital requirement of the company to finance a level of activity of 60,000 units of annual output. Assume uniform production throughout the year. Wages and overheads accrue uniformly. Debtors are to be taken at cost. 12

(2) M/s. Progressive Co. Ltd. is considering an investment in Machine X. The cash flows expected are as under:

Initial Outflow (in lakhs ₹) Cost of Machine	Cash in flows (in lakhs ₹) at the end of				
	1st year	2nd year	3rd year	4th year	5th year
30	—	10	15	12	16

The cost of capital is 10% p.a. PV of ₹ 1 at 10% from year one to five:

End of year	1	2	3	4	5
P/V factor:	·91	·83	·75	·68	·62

Advise the Management whether the machine may be bought using the Net Present Value Method . 4