INTERMEDIATE EXAMINATION

December 2013 *P–10(CMA)*

Syllabus 2012

Cost & Management Accountancy

Time Allowed: 3 Hours Full Marks: 100

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

QUESTION 1, *which is compulsory. Attempt all of them.*

Section-A has three questions. Attempt any two of them.

Section-B has two questions. Attempt any one of them.

Section-C has three questions. Attempt any two of them.

Please: 1. Write answers to all parts of a question together.

2. Open a new page for answer to a new question.

3. Attempt the required number of questions only.

1. Answer all questions:

(a) ANKIT LTD. operates a throughput accounting system. The details of product B-1 per unit are as under:

Selling price	₹ 30
Material Cost	₹ 12
Conversion Cost	₹ 15
Time on bottleneck resources	6 minutes

Calculate the Return per hour for Product B-1. 2

(b) The following figures have been given for Profit and Sales from the accounts of ZEESLIN LTD.

Year	Sales (₹)	Profit (₹)
2011	2,00,000	20,000
2012	3,00,000	40,000

Calculate the sales required to earn a Profit of ₹ 50,000. 2

(c) In a factory of ARITAN LTD. operating Standard Costing System, 2000 kgs of a material @ ₹ 12 per kg were used for a product, resulting in price variance of ₹ 6000 (FAV) and usage variance of ₹ 3000 (ADV). What is the standard material cost of actual production of a product? 2

(d) The cost per unit of a product manufactured in a factory of ZENION LTD. amounts to ₹ 160 (75% variable) when production is 10000 units. If the production increases by 25% what would be the cost of production per unit? 2

(e) What are the limitations of Inter-firm comparison? 2

Please Turn Over

(f) ARIHANT LTD. is a 100% EOU as per the policy announced under the Foreign Trade Policy but is not registered under the provisions of Foreign Trade Policy.

Will this company be exempted from mandatory Cost Audit? 2

(g) A Company is covered under the Companies (Cost Accounting Records) Rules, 2011. But some of its products are not covered under Cost Audit.

Does such Company need to file Compliance Report? 2

(h) What are the determinants of Demand? 3

(i) The demand function is $x = 80 + 2P + 5P^2$ where 'x' is the demand for the commodity at Price 'P'. Find the elasticity of demand at $P = 5$. 3

SECTION A

Answer any two *questions (carrying 20 marks each) from this section.*

2. (a) A review, made by the top management of THAKAR LTD. which makes only one product, of the result of first quarter of the year revealed the following:

Sales in units	10,000
Loss in ₹	10,000
Fixed cost (for the year ₹ 1,20,000) in ₹	30,000
Variable cost per unit in ₹	8

The Finance Manager who feels perturbed suggests that the company should at least break even in the second quarter with a drive for increased sales. Towards this, the company should introduce a better packing which will increase the cost by ₹ 0.50 per unit.

The Sales Manager has an alternate proposal. For the second quarter additional sales promotion expenses can be increased to the extent of ₹ 5,000 and a profit of ₹ 5,000 can be aimed at for the period with increased sales.

The Production Manager feels otherwise. To improve the demand, the selling price per unit has to be reduced by 3 per cent. As a result the sales volume can be increased to attain a profit level of ₹ 4,000 for the quarter.

The Managing Director asks you as a Cost Accountant to evaluate these three proposals and calculate the additional Sales Volume that would be required in each case, in order to help him take a decision.

2+8=10

(b) ESKAY LTD. operates a system of standard costing throughout its division. The company produces an alloy by mixing and processing three materials P, Q and R as per standard data given below:

Materials	Ratio of Input	Cost per kg (₹)
P	2	40
Q	2	60
R	1	85

Note: Loss during processing is 5% of input and this has no realizable value.

During the month of June, 2013, 580000 kg of finished alloy was obtained from inputs as per details given below:

Materials	Quantity Consumed (kg)	Cost per kg (₹)
P	240000	38
Q	250000	59
R	110000	88

You are required to calculate the following variances:

(a) Material Cost Variance;

(b) Material Price Variance;

(c) Material Mix Variance;

(d) Material Yield Variance;

(e) Material Usage Variance. 2×5=10

3. (a) GREEN ENVIRON LTD. has two divisions—M and N. Division-M manufactures product A-15 which it sells in outside market as well as to Division-N which processes it to manufacture Z-25. The Manager of Division-N has expressed the opinion that transfer price is too high. The two Divisional Managers are about to enter into discussions to resolve the conflict and Manager of Division-M to supply him with some information prior to discussions.

Division-M has been selling 50000 units to outsiders and 10000 units to Division-N, all at ₹ 25 per unit. It is not anticipated that these demand will change. The variable cost is ₹ 15 per unit and the fixed costs are ₹ 3 lakhs. Divisional investment in assets is ₹ 12 lakhs.

The Manager of Division-M anticipates that Division-N will want a transfer price of ₹ 22. If he does not sell to Division-N, ₹ 40,000 of fixed costs and ₹ 2,00,000 of assets can be avoided. The Manager of Division-M would have no control over the proceeds from the sale of the assets and is judged primarily on his rate of return.

Required:

(i) Should the Manager of Division-M transfer its products at ₹ 22 to Division-N?

(ii) What is the lowest price that the Division-M should accept? 7+2=9

(b) What are the Pre-requisites for Installation of a Uniform Costing System? 3

(c) The monthly budgets for manufacturing overhead of SHAHEEN LTD. for two levels of activity were as follows:

Capacity	60%	100%
Budgeted production (units)	600	1,000
	₹	₹
Wages	1,200	2,000
Consumable stores	900	1,500
Maintenance	1,100	1,500
Power & Fuel	1,600	2,000
Depreciation	4,000	4,000
Insurance	1,000	1,000
	9,800	12,000

Required:

(i) Indicate which of the items are fixed, variable and semi-variable;

(ii) Prepare a Budget for 80% capacity; and

(iii) Find the total cost, both fixed and variable per unit of output at 60%, 80% and 100% capacity.

1+4+3=8

4. (a) The following information provides details of costs, volumes and cost drivers for a particular period in respect of AKASH INDUSTRIES LTD. for the products X, Y and Z:

	Product X	Product Y	Product Z	Total
1. Production and Sales (Units)	30,000	20,000	8,000	
2. Raw material usage (Units)	5	5	11	
3. Direct material cost (₹)	25	20	11	12,38,000
4. Direct Labour hours	4/3	2	1	88,000
5. Machine hours	4/3	1	2	76,000
6. Direct Labour Cost (₹) per unit	8	12	6	
7. Number of production runs	3	7	20	30
8. Number of deliveries	9	3	20	32
9. Number of receipts (2×7)*	15	35	220	270
10. Number of production orders	15	10	25	50
11. Overhead Costs (₹):				
Set up	30,000			
Machines	7,60,000			
Receiving	4,35,000			
Packing	2,50,000			
Engineering	3,73,000			
	18,48,000			

* The company operates a just-in-time inventory policy and receives each component once per production run.

In the past, the company has allocated overheads to products on the basis of direct labour hours. However, the majority of overheads are related to machine hours rather than direct labour hours. The company has recently redesigned its costing system by recovering overheads using two volume-related bases: machine hours and a materials handling overhead rate for recovering overheads of the receiving department.

Both the current and the previous cost systems reported low profit margins for Product X, which is the company's highest-selling product.

The cost accountant has recently attended a seminar/workshop on Activity Based Costing and the overhead costs for the last period have been analysed by the major activities in order to compute activity-based costs.

Required:

(i) Compute the product costs using a traditional volume-related costing system based on the assumption that:

(A) all overheads are recovered on the basis of direct labour hours (*i.e.* the company's past product costing system); and

(B) the overheads of the receiving department are recovered by a materials handling overhead rate and the remaining overheads are recovered using a machine hour rate (*i.e.* the company's current costing system).

(ii) Compute product costs using an Activity Based Costing System. 5+7=12

(b) Compute a conservative estimate of profit on a contract (which has been 90% complete) from the following particulars.

Also calculate the proportion of profit to be taken to Profit & Loss Account under any three methods.

	₹
Total expenditure to date	4,50,000
Estimated further expenditure to complete the contract (including contingencies)	25,000
Contract price	6,12,000
Work Certified	5,50,800
Work not certified	34,000
Cash received	4,40,640

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(c) Explain the concept of Performance Budgeting. 3

SECTION B

Answer any one *question (carrying 16 marks) from this section.*

5. (a) Under what conditions will the appointment of Cost Auditor for conducting Cost Audit be appointed in firm's name? Who will authenticate such reports and how? 3+1=4

(b) The following figures are extracted from the Accounts of NAVINA LTD. a single manufacturing company.

(Amount in ₹ Lakh)

For the year ended:	**31.3.13**	**31.3.12**	**31.3.11**
Gross fixed assets	4,615	4,212	3,845
Cumulative depreciation	1,312	1,263	1,224
Capital WIP	273	225	317
Investments in Shares and Debentures	724	712	693
Inventories	625	580	511
Sundry Debtors	334	317	292
Advances for purch. of Capital eqpts.	24	61	47
Other loans and advances	65	58	53
Other Current Assets	32	29	26
Sundry Creditors	214	187	174
Provision for expenses	29	34	28
Net Sales	3,924	3,212	2,931
Depreciation	54	47	44
Interest	614	497	416
Profit before taxes (PBT)	232	145	197

You are required to compute the following figures/ratios as stipulated in PARA-9 of the Annexure to Cost Audit Report under the companies (Cost Audit Report) Rules, 2011 for the year ended March 31, 2013 and 2012.

(i) Capital Employed

(ii) Profit before Taxes (PBT) to Capital Employed

(iii) Profit before Taxes (PBT) to Net Sales. 8+2+2=12

6. (a) Enumerate the duties to be performed by a Cost Auditor. 6

(b) During the year ended 31st March, 2013, the profit of ROVERTZ LTD. as per Financial Profit and Loss Account was ₹ 33,248 as given below:

Profit and Loss A/c for the year ended 31st March, 2013

	₹		₹
To Opening Stock	4,94,358	By Sales	6,93,000
To Purchases	1,64,308	By Sundry income	632
	6,58,666		
Less: Closing Stock	1,50,242		
	5,08,424		
To Direct wages	46,266		
Factory overhead	41,652		
Admin. expenses	19,690		
Selling expenses	44,352		
To Net Profit	33,248		
	6,93,632		**6,93,632**

The costing records show:

	₹
Closing Stock	1,56,394
Direct wages absorbed	49,734
Factory overheads absorbed	39,428

Administration expenses calculated at 3% of Sales.

Selling expenses absorbed @ 5% of Sales.

Required:

(i) Find out the impact on Costing Profit & Loss A/c.

(ii) Prepare a Reconciliation Statement and arrive at the profit as per Cost Accounts, using the additional information given above. 3+4=7

(c) Is it necessary to first prepare ''Unit wise'' and ''product/activity'' Cost Statements and then merge into product group-wise Cost Statement for the Company as a whole? 3

Section C

Answer any two *questions (carrying 12 marks each) from this section.*

7. (a) What are the factors involved in Demand Forecasting? 4

(b) The Demand and Supply function under perfect Competition are $y=16-x^2$ and $y=2x^2+4$ respectively.

Find:

(i) the Market Price

(ii) Consumer's Surplus 2+2=4

(c) NANDINI ELECTRICALS an electronics firm assumes a cost function $C(x) = x(\frac{x^2}{10}+200)$, where 'x' is a monthly output in thousands of units. Its revenue function is given by $R(x) = x(1100-1{\cdot}5x)$.

Find:

(i) the output required per month to make the Marginal Profit = 0; and

(ii) the Profit of this level of output. 3+1=4

8. (a) State the main features of Perfect Competition Market. 4

(b) HITACHI LTD. an air conditioner manufacturer, produces 'x' sets per week at a total cost of $x^2+780x+25000$. The firm is a monopolist and the demand function for its product is $x=(15000-\frac{p}{4})$, where the price is 'p' per set.

(i) Determine the number of AC sets to be produced per week at which the firm will earn maximum net revenue; and

(ii) Decide the monopoly price. 3+1=4

(c) The efficiency (E) of a small manufacturing concern depends on the number of workers (W) and is given by: $10E = \frac{-W^3}{40} + 30W - 392$.

Find the strength of the workers, which give maximum efficiency. 4

9. (a) AJANTA FOOTWEARS LTD. intends to introduce in the market two products of the following characteristics:

(i) 'Comfort walk'–shoe for elderly people—considered quite new in the market with a high degree of consumer acceptability.

(ii) 'Glamour' sandals (with coloured laces crossing) for young LADIES—considered to be one which is already served by other well known brands.

State suitable pricing strategies, together with your valid arguments, for each of them separately. 2+2=4

(b) Assume that for a closed economy, E=C+I+G,

where E=Total expenditure on Consumption Goods,

I=Exp. on Investment Goods

G=Govt. spending

For equilibrium, we must have E=Y, Y being total income received.

For a certain Economy, it is given that C=15+0.9Y, where I=20+0.05Y and G=25.

Find the equilibrium values of Y, C and I. How will these change, if there is no Govt. spending? 2+2=4

(c) A firm has revenue function given by R=10Q where R=Gross Revenue and Q=Number of Units Sold, Production Cost function is given by

$C = 20000 + 50(\frac{Q}{800})^2$

Find:

(i) the total Profit function, and

(ii) the number of Units (Q) to be sold to get the maximum Profit. 1+3=4
