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TEST-6
CA INTER
(12-03-2023)
COST AND MANAGEMENT ACCOUNTING

Topics Covered:

1. Standard Costing
2. Cost Accounting Systems
3. Activity Based Costing

Roll No …645321……

Total No. of Question: 9 | **Total No. of Printed Pages: 8**

Time allowed: 3 hours | **Maximum Marks: 100**

Answer to questions are to be given only in English except in the case of candidates who have opted for Hindi Medium. If a candidate has not opted for Hindi Medium, his/her answers in Hindi will not be valued.

All Questions are compulsory.

Working notes should form part of the answer.

Q.1 A company produces a finished product by using three basic raw materials. The following standards have been set – up for raw materials:

Material	Standard – Mix in %	Standard Price per Kg. in ₹
A	35	40
B	45	30
C	20	20

The standard loss in process is 10% of input. During a particular month, the company produced 2,600 Kgs. of finished product. The details of stock and purchases for the month are as under:

Material	Opening Stock	Closing Stock	Purchases during the month	
	(Kgs.)	(Kgs.)	Quantity in Kgs.	Cost in ₹
A	200	350	800	36,000
B	150	250	1,000	35,000
C	300	200	1,100	20,800

The opening stock is valued at standard cost. ***Compute:***

(i) Material price and Material cost variances, when:

a. Variance is calculated at the point of issue of 'First-in First-out' basis.

b. Variance is calculated at the point of issue of 'Last-in First-out' basis.

(ii) Material Cost variance

(iii) Material usage variance

(iv) Material mix variance, and

(v) Material Yield variance **[10 Marks]**

Q.2 The following was the composition of gang of workers in a factory during a particular month, in one of the production departments. The standard composition of workers and wage rate per hour were as below:

Skilled : Two workers at a standard rate of ₹100 per hour each.
Semi – skilled : Three workers at a standard rate of ₹72 per hour each.
Unskilled : Five workers at a standard rate of ₹50 per hour each.

The standard output of the gang was four units per hour, of the product.
During the month in question, however, the actual composition of the gang and hourly rates paid were as under:

Nature of worker	No of Workers	Wage rate paid per worker per hour engaged
Skilled	3	₹112
Semi-skilled	4	69
Unskilled	3	53

The gang was engaged for 200 hours during the month, which included 12 hours when no production was possible, due to machine break-down, 810 units of the product were recorded as output of the gang during the month.

You are required:

(a) To compute the standard unit labour cost of the product;
(b) To compute the total variance in labour cost during the month; and
(c) Analyze the variance in (b) above into sub-variances and reconcile. **[10 Marks]**

Q.3 The Standard Cost Card of producing one unit of item 'Q' is as under:

Direct Material -	A – 12 kg. @ ₹ 10/-	= ₹ 120
	B – 5 kg. @ ₹ 6/-	= ₹ 30
Direct Wages -	5 hrs. @ ₹ 3/-	= ₹ 15
Fixed Production Overheads		= ₹ 35
Total Standard Cost:		₹ 200
Standard Gross Profit		= ₹ 50
Standard Sale Price		= ₹ 250

Fixed Production overhead is absorbed on expected annual output of 13,200 units.
Actual result for the month September, 2022 are as under:

		₹
Actual Production:	1,100 Units	
Sales	1,100 Units @ ₹ 270	= 2,97,000
Direct Material	A – 11,500 Kg.	= 1,26,500
	B – 5,900 Kg.	= 29,500
Direct Wages	- 5,900 Hrs.	= 23,600
Fixed Overheads		= 43,000
		2,22,600
	Gross Profit	= 74,400

You are required to calculate all variances. Material price variance is taken out at the time of Issue of Material. Material purchased were:
12,000 Kg. of 'A' @ '11 & 6,000 Kg. of 'B' @ ₹5.00 **[12 Marks]**

Q.4 Following is the standard cost card of a component:

Materials	2 Units at ₹15	₹30
Labour	3 Hours at ₹20	₹60
Total overheads	3 Hours at ₹10	₹30

During a particular month 12,000 units of the component were produced and the same was found to be at 60% capacity of the budget. In preparing the variance report for the month, the cost accountant gathered the following information:

Labour	₹ 6,50,000
Variable overheads	₹ 2,00,000
Fixed overheads	₹ 3,00,000
Material price variance	₹ 75,000 (A)
Material cost variance	₹ 50,000 (A)
Labour rate variance	₹ 50,000 (F)
Fixed overhead expenditure variance	₹ 70,000 (A)

You are required to prepare from the above details:
(i) Actual material cost incurred.
(ii) Standard cost of materials actually consumed.
(iii)Labour efficiency variance
(iv)Variance O/H efficiency variance
(v) Variance O/H expenditure variance
(vi)Fixed O/H efficiency variance
(vii) Fixed O/H capacity variance
(viii) Fixed O/H volume variance **[12 Marks]**

Q.5 The following balances were extracted from a company's ledger as on 31st December, 2022:

	Details	Amount
Raw materials control A/c	₹48,836	-
Work – in – progress control A/c	14,745	-
Finished stock control A/c	21,980	-
Nominal ledger control A/c	--------	85,561

	85,561	85,561

Further transactions took place during the following quarter as follows:

Factory overhead – allocated to WIP	₹16,786
Factory overheads incurred	20,000
Goods finished – at cost	36,834
Raw material purchased	22,422
Direct wages – allocated to WIP	18,370
Cost of goods sold	42,000
Raw materials – issued to production	17,000
Raw materials – credited by suppliers	1,000
Inventory audit – raw material losses (Normal)	1,300
WIP rejected (with no scrap value)	1,800
Customer's returns of finished goods	3,000
Sales	65,000

Prepare all the Ledger Accounts in Cost Ledger. **[10 Marks]**

Q.6 The profit and loss account as shown in the financial books of a company for the year ended 31-3-23 together with a statement of reconciliation between the profit as per financial and cost accounts is given below:

Profit and Loss Account for the year ended 31-3-23

Particulars	Details	Amount	Particulars	Details	Amount
Opening stock:			Sales		15,00,000
Raw Material	90,000		Closing stock:		
Work-in-progress	50,000		Raw Material	98,000	
Finished goods	70,000	2,10,000	Work-in-progress	53,000	
Raw material purchases		5,00,000	Finished goods	72,000	2,23,000
Direct wages		2,00,000	Miscellaneous Income		45,000
Factory overheads		2,00,000			
Administration expenses		1,70,000			
Selling & distribution exp.		2,20,000			
Preliminary expenses w / off		72,000			
Debenture interest		23,000			
Net profit		1,73,000			
		17,68,000			17,68,000

Statement of reconciliation of profit as per financial and cost accounts:

Profit as per Financial Accounts		₹1,73,000
(a) Difference in valuation of stock:		
Add: Raw materials – closing stock	₹1,200	
Work-in-progress – opening stock	1,300	

Finished goods – opening stock	2,400	
- closing stock	2,000	
Total (A)	6,900	
Less: Raw Materials – opening stock	1,650	
Work-in-progress - closing stock	1,750	
Total (B)	3,400	
A – B		3,500
(b) Other items		
Add: Preliminary expenses written off	72,000	
Debenture interest	23,000	
	95,000	
Less: Miscellaneous receipts	45,000	50,000
Factory overheads Over absorbed		12,000
Selling & Distribution overheads under absorbed		7,000
Profit as per Cost Accounts		2,21,500

You are required to prepare the following accounts as they would appear in the Costing Ledger: (i) Raw material control a/c; (ii) Work-in-progress control a/c; (iii) Finished goods control a/c; (iv) Cost of Sales a/c; (v) Costing Profit & Loss a/c. **[10 Marks]**

Q.7 You are given the following information of the cost department of a manufacturing company:

	₹
Stores:	
Opening balance	12,60,000
Purchases of material	67,20,000
Transfer from work-in- progress	33,60,000
Issues to work-in-progress	67,20,000
Issues to repair and maintenance	8,40,000
Deficiency	2,52,000
Work-in-progress:	
Opening balance	25,20,000
Direct wages applied	25,20,000
Overheads applied	90,08,000
Closing balance	15,20,000
Finished products:	
Entire output is sold at a profit of 20% on actual cost from work-in-progress	
Other information:	
Wages incurred	29,40,000
Overhead incurred	95,50,000
Income from Investment	4,00,000
Loss on sale of fixed assets	8,40,000

Shortage in stock taking is treated as normal loss.

You are require to prepare:
(i) Stores control account;
(ii) Work-in-progress control account;
(iii) Costing Profit and Loss account;
(iv) Profit and Loss account and
(v) Reconciliation statement **[12 Marks]**

Q.8 Having attended a CIMA course on activity based costing (ABC) you decide to experiment by applying the principles of ABC to the four products currently made and sold by your company. Details of the four products and relevant information are given below for one period;

Product	**A**	**B**	**C**	**D**
Output in units	150	180	130	120
Costs per unit:				
Direct material	₹ 40	₹ 50	₹ 30	₹ 60
Direct labour	28	21	14	21
Machine hours (per unit)	4	3	2	3

The four products are similar and are usually produced in production runs of 20 units and sold in batches of 10 units.
The production overhead is currently absorbed by using a machine hour rate, and the total of the production overhead for the period has been analyzed as follows:

Machine department costs (rent, business, rates, depreciation and supervision)	₹ 60,430
Set – up costs	25,250
Stores receiving	33,600
Inspection/Quality control	32,100
Materials handling and dispatch	24,620

You have ascertained that the "cost drivers" to be used are as listed below for the overhead costs shown:

Cost	**Cost Driver**
Set – up costs	Number of production runs
Stores receiving	Requisitions raised
Inspection/Quality control	Number of production runs
Materials handling and dispatch	Orders executed

The number of requisitions raised on the stores was 30 for each product and the number of orders executed was 58, each order being for a batch of 10 of a product.

You are required:
(a) to calculate the total costs for each product if all overhead costs are absorbed on a machine hour basis;
(b) to calculate the total costs for each product, using activity based costing.
(c) to calculate and list the unit product costs from your figures in (a) and (b) above, to show the differences and to comment briefly on any conclusions which may be drawn which could have pricing and profit implications. **[14 Marks]**

Q.9 Alpha Limited has decided to analyze the profitability of its five new customers. It buys bottled water at ₹ 85 per case and sells to retail customers at a list price of ₹ 120 per case. The data pertaining to five customers are:

Customers	A	B	C	D	E
Cases sold	4,680	19,688	1,36,800	71,550	8,775
List Selling Price	₹120	₹120	₹ 120	₹ 120	₹ 120
Actual Selling Price	₹118	₹116.20	₹109	₹104.40	₹107.20
Number of Purchase orders	18	25	30	25	30
Number of Customer visits	2	3	6	2	3
Number of Deliveries	10	30	60	40	20
Kilometers traveled per delivery	20	6	5	10	30
Number of expedited deliveries	0	0	0	1	1

Its five activities and their cost drivers are:

Activity	Cost Driver Rate
Order taking	₹ 780 per purchase order
Customer visits	₹ 620 per customer visit
Deliveries	₹ 5.75 per delivery Km traveled
Product handling	₹ 4.75 per case sold
Expedited deliveries	₹ 2,750 per expedited delivery

Required:

(1) Compute the customer – level operating income of each of five retail customers now being examined (A, B, C, D and E). Comment on the results.

(2) What insights are gained by reporting both the list selling price and the actual selling price for each customer?

(3) What factors Alpha Limited should consider in deciding whether to drop one or more of five customers?

[10 Marks]

SPACE FOR ROUGH WORK