

**CMA JANUARY 2022 EXAMINATION
 INTERMEDIATE LEVEL I
 COST ACCOUNTING**

Course Code	: CM121	Total Marks	: 100
Reading Time	: 15 minutes	Writing Time	: 180 minutes

Instructions to Candidates

- You **MUST NOT** write anything during the reading time.
- You should attempt ALL questions.
- Answers should be properly structured and relevant.
- Carefully read ALL the requirements and sub-questions before attempting a specific question.
- ALL answers must be written in the answer book.
- **AVOID WRITING/MARKING** on the question paper at any time which may cause disciplinary action.
- Start answering each question from a fresh sheet.
- Answers should be clearly numbered with the sub-question number.

Allowable Materials

- Writing Stationaries
- Non-programmable Calculator

Assessment Structure

			<i>Sub-question</i>	<i>Marks</i>	<i>Expected Time Required</i>
Section A	Question 1	Multiple Choice Questions	10	10	20 minutes
	Question 2	Modified True/False	5	5	10 minutes
	Question 3	Matching	5	5	10 minutes
Section B	Question 4	Essay/Computational/Case	3	20	32.50 minutes
	Question 5	Essay/Computational/Case	3	20	32.50 minutes
	Question 6	Essay/Computational/Case	3	20	32.50 minutes
	Question 7	Essay/Computational/Case	3	20	32.50 minutes
Revision					10 minutes
Total				100	180 minutes

RESTRICTED USE

This paper MUST NOT BE REMOVED from the examination venue

Do not turn the page until instructed

SECTION A [20 MARKS]

THERE ARE 3 (THREE) QUESTIONS IN THIS SECTION. ANSWER ALL THE QUESTIONS IN THE ANSWER SCRIPT FOLLOWING THE EXAMPLE PROVIDED FOR THE SPECIFIC QUESTION.

QUESTION 1

[10 × 1 = 10 MARKS]

There are ten (10) multiple-choice questions with five options. Pick the option that best explains the given question. Write your answer on the answer script [DO NOT PUT ANY MARK ON THE QUESTION PAPER]. Follow the example given below in providing your answer.

Example:

- (i) ICMAB stands for the –
- (a) Institute of Cost Management Accounting of Bangladesh
 - (b) Institute of Cost and Management Accountants of Bangladesh
 - (c) Institute for Cost Managers and Accounting of Bangladesh
 - (d) Institute of Cost Management Accountants of Bangladesh
 - (e) Industrial Cost Management Accountants of Bangladesh

Answer: (i) (b)

- (i) The main objective of cost accounting is:
- (a) To record day-to-day business transactions
 - (b) To measure managerial efficiency
 - (c) To ascertain the true cost of products and services
 - (d) To determine tender price
 - (e) None of these
- (ii) Cost Accounting concepts include all the following except -
- (a) Planning
 - (b) Controlling
 - (c) Profit sharing
 - (d) Product costing
 - (e) Service costing
- (iii) A biscuit manufacturing company uses:
- (a) Operating costing
 - (b) Departmental costing
 - (c) Batch costing
 - (d) Contract costing
 - (e) None of these
- (iv) Process costing is suitable for -
- (a) Hospitals
 - (b) Oil refining firms
 - (c) Transport firms
 - (d) Brick laying firms
 - (e) All
- (v) The cost which is to be incurred even when a business unit is closed is a _
- (a) Imputed cost
 - (b) Historical cost
 - (c) Sunk cost
 - (d) Shutdown cost
 - (e) None of these
- (vi) Audit fees is a part of -
- (a) Works on cost
 - (b) Selling overhead
 - (c) Distribution overhead
 - (d) Administration overhead
 - (e) None of these

- (vii) In case of rising prices (inflation), FIFO method will:
- provide lowest value of closing stock and profit
 - provide highest value of closing stock and profit
 - provide highest value of closing stock but lowest value of profit
 - provide highest value of profit but lowest value of closing stock
 - None of these
- (viii) Comparing Rowan plan and Halsey plan, it is seen that when the time saved is less than 50% of the standard time-
- Rowan plan allows more wages to a worker than Halsey plan
 - Rowan plan allows less wages to a worker than Halsey plan
 - Rowan and Halsey plan allow equal wages to a worker
 - Rowan plan and Halsey plan are equal to ordinary time wage
 - None of these
- (ix) Manufacturing, distribution and marketing costs incur after split off point is classified under
- Separable costs
 - Joint costs
 - Main costs
 - Split off costs
 - None of these
- (x) If economic order quantity for one year is 15000 packages and demand in units for one year are 1500 units, then number of deliveries in a year will be
- 16
 - 12
 - 10
 - 14
 - 18

QUESTION 2

[5 × 1 = 5 MARKS]

There are five (5) statements given under the question. Identify the statements as True or False. If the statement is false, rewrite the statement on the answer script to make it 'True'. Reasoning is NOT required. Follow the example given below in providing your answer.

Example:

(a) ICMAB stands for the Industrial Cost Management and Accounting of Bangladesh.

Answer:

(a) False. ICMAB stands for the Institute of Cost and Management Accountants of Bangladesh.

Note:

- You will not get any mark if you simply rewrite as ICMAB *does not* stand for the Industrial Cost Management Accountants of Bangladesh.
- If the statement is true, you need NOT to rewrite the statement rather only mention that the statement is *True*.

- Cost is a part of expense.
- A semi-variable cost is one that has the elements of both fixed and variable cost.
- Manufacturing cost is equal to sum of prime cost and conversion cost.
- Activity-based costing is more accurate than traditional system.
- Target costing* is a contemporary cost accounting tool.

QUESTION 3**[5 × 1 = 5 MARKS]**

Match the items of column A with the most suitable items of column B. Match only one item of column A with one item of column B. Write your answer on the answer script. Follow the example given below in providing your answer.

Example:

Column A	Column B
1. ICMAB	(a) Professional accountancy body (b) University

Answer: 1 (a)

Column A	Column B
(1) Job costing	(a) Variance analysis
(2) Process costing	(b) Statutory audit
(3) Service costing	(c) Prevention cost
(4) Joint products	(d) Similar products and mass production
(5) Standard costing	(e) Dissimilar products and mass production
	(f) More output from one input
	(g) Transportation firms
	(h) Conversion cost
	(i) Customized goods
	(j) Internal control

END OF SECTION A

SECTION B [80 MARKS]

THERE ARE 4 (FOUR) QUESTIONS IN THIS SECTION. ANSWER ALL THE QUESTIONS IN THE ANSWER SCRIPT. SHOW ALL RELEVANT COMPUTATION.

QUESTION 4**[(5+5+10) = 20 MARKS]**

- (a) Wage incentive plans are successful in plants operating near full capacity.
- Discuss the desirability of using these plans during periods of curtailed production.
 - Is it advisable to install an incentive wage plan in a plant operating at 60% of capacity? Discuss.
- (b) Over or under applied overhead can be analyzed into two parts called variances. Name these variances, state the reason(s) for their titles, and show their computations.
- (c) Chadwick Shoe Co. produces and sells an excellent quality walking shoe. After production, the shoes are distributed to 20 warehouses around the country. Each warehouse services approximately 100 stores in its region. Chadwick uses an EOQ model to determine the number of pairs of shoes to order for each warehouse from the factory. Annual demand for Warehouse OR2 is approximately 120,000 pairs of shoes. The ordering cost is Tk. 250 per order. The annual carrying cost of a pair of shoes is Tk. 2.40 per pair.

Required:

- Use the EOQ model to determine the optimal number of pairs of shoes per order.
- Assume each month consists of approximately 4 weeks. If it takes 1 week to receive an order, at what point should warehouse OR2 reorder shoes?
- Although OR2's average weekly demand is 2,500 pairs of shoes (120,000 /12 months/ 4 weeks), demand each week may vary with the following probability distribution:

Total demand for 1 week	2,000 pairs	2,250 pairs	2,500 pairs	2,750 pairs	3,000 pairs
Probability (sums to 1.00)	0.04	0.20	0.52	0.20	0.04

If a store wants shoes and OR2 has none in stock, OR2 can “rush” them to the store at an additional cost of Tk. 2 per pair. How much safety stock should Warehouse OR2 hold? How will this affect the reorder point and reorder quantity?

QUESTION 5

[(4 + 4 + 12) = 20 MARKS]

- (a) What is meant by target costing? Explain with an example.
- (b) Discuss in brief the stages of product life cycle.
- (c) In response to intensive foreign competition, the management of Falcon Incorporation has attempted over the past year to improve the quality of its product. A statistical process control system has been installed and other steps have been taken to decrease the amount of warranty and other field costs, which have been trending upward over the past several years. Cost relating to quality and quality control over the last two years are given below:

	2021 (Tk.)	2020 (Tk.)
Inspection of materials	900,000	750,000
Quality engineering	570,000	420,000
Packaging inspection	240,000	210,000
Rework	1,500,000	1,050,000
Statistical process control	180,000	-
Field servicing	900,000	1,200,000
Returns	60,000	30,000
System development	750,000	480,000
Warranty	1,050,000	3,600,000
Scrap	1,125,000	630,000
Repairs	1,200,000	810,000
Product recalls	750,000	2,100,000
Design changes	975,000	720,000

Sales have been flat over the past few years, at Tk. 75,000,000 per year. A great deal of money has been spent in the effort to upgrade quality, and management is anxious to see whether or not the effort has been effective.

Instructions:

Prepare quality cost report that contains data for both this year and last year.

QUESTION 6

[(2 + 8 + 10) = 20 MARKS]

- (a) Why might an advertising agency use job costing for an advertising campaign by Pepsi, whereas a bank might use process costing to determine the cost of checking account deposits?
- (b) Erie Company manufactures a small mp3 player called the Jogging Mate. The company uses standards to control its costs. The labor standards that have been set for one Jogging Mate mp3 player are as follows:

Standard Hours	Standard Rate per Hour	Standard Cost
18 minutes	Tk. 12.00	Tk. 3.60

During August, 5,750 hours of direct labor time were needed to make 20,000 units of the Jogging Mate. The direct labor cost totaled Tk. 73,600 for the month.

Required:

- (1) According to the standards, what direct labor cost should have been incurred to make 20,000 units of the Jogging Mate? By how much does this differ from the cost that was incurred?
- (2) Break down the difference in cost from (1) above into a labor rate variance and a labor efficiency variance.

(3) The budgeted variable manufacturing overhead rate is Tk. 4 per direct labor-hour. During August, the company incurred Tk. 21,850 in variable manufacturing overhead cost. Compute the variable overhead rate and efficiency variances for the month.

(c) Jarvene Corporation uses the FIFO method in its process costing system. The following data are for the most recent month of operations in one of the company's processing departments:

Units in beginning inventory	400
Units started into production	3,000
Units in ending inventory	300
Units transferred to the next department	3,100

	Materials	Conversion
Percentage completion of beginning inventory	80%	40%
Percentage completion of ending inventory	70%	60%

The cost of beginning inventory according to the company's costing system was Tk. 11,040 of which Tk. 5,231 was for materials and the remainder was for conversion cost. The costs added during the month amounted to Tk. 132,730. The costs per equivalent unit for the month were:

	Materials	Conversion
Cost per equivalent unit	Tk. 25.40	Tk. 18.20

Required:

- Compute the total cost per equivalent unit for the month.
- Compute the equivalent units of material and of conversion in the ending inventory.
- Compute the equivalent units of material and of conversion that were required to complete the beginning inventory.
- Determine the number of units started and completed during the month.
- Determine the costs of ending inventory and units transferred out.

QUESTION 7

[(2 + 8 + 10) = 20 MARKS]

- "ABC systems only apply to manufacturing companies." Do you agree? Explain.
- Tasty, Inc., is a producer of potato chips. A single production process at Tasty, Inc., yields potato chips as the main product and a byproduct that can also be sold as a snack. Both products are fully processed by the split off point, and there are no separable costs.

For September 2021, the cost of operations is Tk. 500,000. Production and sales data are as follows:

	Production (in pounds)	Sales (in pounds)	Selling Price per Pound
Main Product: Potato Chips	52,000	42,640	Tk. 16
Byproduct	8,500	6,500	Tk. 10

There were no beginning inventories on September 1, 2021.

- What is the gross margin for Tasty, Inc., under the production method and the sales method of byproduct accounting?
 - What are the inventory costs reported in the balance sheet on September 30, 2021, for the main product and byproduct under the two methods of byproduct accounting in requirement 1?
- (c) Snappy Tiles is a small distributor of marble tiles. Snappy identifies its three major activities and cost pools as ordering, receiving and storage, and shipping, and it reports the following details for 2021:

Activity	Cost Driver	Quantity of Cost Driver	Cost per Unit of Cost Driver
1. Placing and paying for orders of marble tiles	Number of orders	500	Tk. 50 per order
2. Receiving and storage	Loads moved	4,000	Tk. 30 per load
3. Shipping of marble tiles to retailers	Number of shipments	1,500	Tk. 40 per shipment

For 2021, Snappy buys 250,000 marble tiles at an average cost of Tk. 3 per tile and sells them to retailers at an average price of Tk. 4 per tile. Assume Snappy has no fixed costs and no inventories.

Required:

- (1) Calculate Snappy's operating income for 2021.
- (2) For 2022, retailers are demanding a 5% discount off the 2021 price. Snappy's suppliers are only willing to give a 4% discount. Snappy expects to sell the same quantity of marble tiles in 2022 as in 2021. If all other costs and cost-driver information remain the same, calculate Snappy's operating income for 2022.
- (3) Suppose further that Snappy decides to make changes in its ordering and receiving-and-storing practices. By placing long-run orders with its key suppliers, Snappy expects to reduce the number of orders to 200 and the cost per order to Tk. 25 per order. By redesigning the layout of the warehouse and reconfiguring the crates in which the marble tiles are moved, Snappy expects to reduce the number of loads moved to 3,125 and the cost per load moved to Tk. 28. Will Snappy achieve its target operating income of Tk. 0.30 per tile in 2022? Show your calculations.

END OF SECTION B
