

**CMA JUNE, 2019 EXAMINATION  
PROFESSIONAL LEVEL-I  
SUBJECT: 102. COST ACCOUNTING**

Time: Three hours

Full Marks: 100

- ❖ All questions are to be attempted.
- ❖ Show computations, where necessary.
- ❖ Answer must be brief, relevant, neat and clean.
- ❖ Start answering each question from a fresh sheet.

**Q. No. 1**

- (a) Define Cost Accounting. Describe the different elements of production overhead with example.
- (b) Describe the uses of cost information for managerial decision.
- (c) Safayet is examining customer-service costs related to ABC Product. ABC Product are sold with a six-month guarantee of full repair or replacement with a new product. When a product is returned by a customer, a service report is prepared. This service report includes details of the problem and the time and cost of resolving the problem. Weekly data for the most recent 8-week period are as follows:

Week	Customer-Service Department Costs	Number of Service Reports
1	Tk. 13,700	190
2	20,900	275
3	13,000	115
4	18,800	395
5	14,000	265
6	21,500	455
7	16,900	340
8	21,000	305

**Required:**

- (i) Use the high-low method to compute the cost function, relating customer-service costs to the number of service reports.
- (ii) Use regression model to determine the cost function and determine the cost if number of service reports is 210 in week 9.
- (d) Abdullah Company manufactures furniture, including tables. Selected costs are given below:
- (i) The tables are made of wood that costs Tk. 100 per table.
- (ii) The tables are assembled by workers, at a wage cost of Tk. 40 per table.
- (iii) Workers assembling the tables are supervised by a factory supervisor who is paid Tk. 38,000 per year.
- (iv) Electrical costs are Tk. 2 per machine-hour. Four machine-hours are required to produce a table.
- (v) The depreciation on the machines used to make the tables totals Tk. 10,000 per year. The machines have no resale value and do not wear out through use.
- (vi) The salary of the president of the company is Tk. 100,000 per year.
- (vii) The company spends Tk. 250,000 per year to advertise its products.
- (viii) Salespersons are paid a commission of Tk. 30 for each table sold.
- (ix) Instead of producing the tables, the company could rent its factory space for Tk. 50,000 per year.

**Required:** Prepare an answer sheet with the following column headings.

Name of the item	Fixed Costs	Variable Costs	Direct Materials	Direct Labor	Manufacturing O/H	Product Cost	Period Cost

Enter each cost under the heading "Name of the item" on your answer sheet and place an "X" mark under the appropriate headings.

**[Marks: (4+4+7+5) = 20]**

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**Q. No. 2**

- (a) The purchase department of your organization has received an offer of quantity discounts on its order of materials as under:

Price per ton (Tk.)	Tons
1,200	Less than 500
1,180	500 and less than 1,000
1,160	1,000 and less than 2,000
1,140	2,000 and less than 3,000
1,120	3,000 and above

The annual requirement of the material is 5,000 tons. The ordering cost per order is Tk. 1,200 and stock holding cost is estimated at 20% of the material cost per annum.

**Required:** Compute the most economical purchase level using the tabular method.

- (b) Determine the inventory value for each item according to IAS 2.

Item	Original Cost	Replacement Cost	Sales price	Estimated cost to complete & sell	Normal Profit Margin
A	.67	.62	.72	.04	.08
B	2.20	2.12	2.22	.12	.08
C	.19	.20	.24	.03	.01
D	.93	.87	.97	.05	.04

- (c) SNP company would like to determine the safety stock to maintain for a product, so that the lowest combination of stock out cost and carrying cost would result. Each stock out will cost Tk. 75; the carrying cost for each safety stock unit will be Tk. 1, the product will be ordered five times a year. The following probabilities of running out of stock during an order period are associated with various safety stock levels:

Safety Stock level	Probability of Stock out
10 units	40%
20	20
40	10
80	5

**Required:**

Determine the combined stock out and safety stock carrying cost associated with each level and recommended level of safety stock.

- (d) Los Angeles Fabricators manufactures jacks and other lifting equipment. One order from Seattle Supply House for 1,000 jacks showed the following cost per unit: material, Tk. 5, Labor, Tk1.75, factory overhead applied at 160% of direct labor cost (150% in cases in which any defective unit costs are to be charged to a specific order). Final inspection revealed that 75 of the units were improperly riveted. To correct each defective unit requires Tk. 0.20 for material, Tk.30 for labor and factory overhead at appropriate rate.

**Required:** Prepare journal entries for all costs related to the order when the:

- (i) Order is charged with the cost of defective work.  
 (ii) Cost of correcting defective work is not charged to a specific order.

**[Marks: (6+4+4+6) = 20]**

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**Q. No. 3**

(a) Discuss Merrick differential piece rate and Gantt's Task bonus system with an example. From the following particulars you are required to work out the earnings of a worker for a week under:

- i. Straight piece rate. ii. Differential piece rate. iii. Halsey premium bonus scheme (50% sharing) and iv. Rowan premium bonus scheme:

Weekly working hours	48
Hourly wage rate	Tk. 3.75
Rate per piece	Tk. 1.5
Normal time taken per piece	20 minutes
Normal output per week	120 pieces
Actual output for the week	150 pieces
Differential piece rate	80% of piece rate when output is below normal and 120% of piece rate when output is at or above standard.

(b) JS company submitted the following labor data for the first week in June:

	Units	Hours
Monday	270	8
Tuesday	210	8
Wednesday	300	8
Thursday	240	8
Friday	260	8

**Required:**

Prepare a schedule showing JS 's weekly earnings, the effective hourly rate, and the labor cost per unit, assuming a 100 percent bonus plan with a base wage of Tk. 9 per hour and a standard production rate of 30 units per hour.

(c) Standard production for an employee in the Assembly department is 20 units per hour in an 8 hour day. The hourly wage rate is Taka 7.50. If an incentive wage plan is used with the worker receiving 80% of the time saved each day, and records indicate

Day	Hours	Units Produced
Monday	8	160
Tuesday	8	170
Wednesday	8	175

**Required:** Compute the employee earnings.

(d) ABC produces printed circuits for the electronics industry. The firm has recently initiated a 100% group bonus plan with standard production set at 50 units per hour. The company employs 10 workers on an 8 hour shift at Tk. 8 per hour. Depreciation on plant equipment is Tk. 9 per hour and other overhead is applied at Tk. 7 per hour. Production for the first week under 100 percent group bonus plan was:

Day	Units Produced
Monday	3,800
Tuesday	4,500
Wednesday	4,600
Thursday	4,500
Friday	4,400

Management is interested in appraising the results of the new incentive wage plan.

**Required:**

Prepare a schedule showing employee earnings, unit labor cost, unit overhead cost and conversion cost per unit.

**[Marks: (8+3+4+5) = 20]**

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**Q. No. 4**

- (a) Explain equivalent units. Why are equivalent-unit calculations necessary in process costing?  
 (b) Explain some methods managers can use to allocate costs of multiple support departments to operating departments.  
 (c) DMMM, Inc., manufactures athletic shoes and athletic clothing for both amateur and professional athletes. The company has two product lines (clothing and shoes), which are produced in separate manufacturing facilities; however, both manufacturing facilities share the same support services for information technology and human resources. The following shows total costs in thousand for each manufacturing facility and for each support department.

<b>Departments</b>	<b>Variable Cost</b>	<b>Fixed Cost</b>	<b>Total Costs</b>
Information technology (IT)	Tk. 500	Tk. 1,500	Tk. 2,000
Human resources (HR)	Tk. 100	Tk. 900	Tk. 1,000
Clothing	Tk.3,000	Tk. 7,000	Tk.10,000
Shoes	Tk.2,500	Tk.5,500	Tk.8,000
<b>Total costs</b>	<b><u>Tk.7,100</u></b>	<b><u>Tk.16,900</u></b>	<b><u>Tk.24,000</u></b>

The total costs of the support departments (IT and HR) are allocated to the production departments (clothing and shoes) using a single rate based on the following:

Information technology:           Number of IT labor hours worked by department  
 Human resources:                 Number of employees supported by department

Data on the bases, by department, are given as follows:

<b>Department</b>	<b>IT Hours Used</b>	<b>Number of Employees</b>
Clothing	5,000	120
Shoes	3,000	40
Information technology	-	40
Human resources	2,000	-

**Required:**

- (i) What are the total costs of the production departments (clothing and shoes) after the support department costs of information technology and human resources have been allocated using (a) the direct method, (b) the step-down method (allocate information technology first), (c) the step-down method(allocate human resources first), and (d) the reciprocal method?  
 (ii) Assume that all of the work of the IT department could be outsourced to an independent company forTk.97.50 per hour. If DMMM no longer operated its own IT department, 30% of the fixed costs of the IT department could be eliminated. Should DMMM outsource its IT services?

**[Marks: (3+3+14) = 20]**

**Q. NO. 5**

- (a) How do you distinguish job costing from process costing?  
 (b) Compare how service, retail, and manufacturing organizations report costs on their financial statements and how they account for inventories.  
 (c) DMMR is a manufacturing company. On 1 June 2017, there was one uncompleted job in the factory. The job card for this work is summarised as follows.

*Job card, job no 6832*

<b>Costs to date</b>	Tk.
Direct materials	630
Direct labor (120 hours)	840
Factory overhead (Tk.2 per direct labor hour)	<u>240</u>
<b>Factory cost to date</b>	<b><u>1,710</u></b>

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Q. NO. 5(cont'd...)

During June, three new jobs were started in the factory, and costs of production were as follows:

<b>Direct materials</b>	Tk.
Issued to:	
Job 6832	2,390
Job 6833	1,680
Job 6834	3,950
Job 6835	4,420
Damaged inventory written off from stores	2,300
<b>Material transfers</b>	Tk.
Job 6834 to Job 6833	250
Job 6832 to 6834	620
<b>Materials returned to store</b>	Tk.
From Job 6832	870
From Job 6835	170
<b>Direct labor hours recorded</b>	Hours
Job 6832	430
Job 6833	650
Job 6834	280
Job 6835	410

The cost of labor hours during June 2017 was Tk.8 per hour, and production overhead is absorbed at the rate of Tk. 2 per direct labor hour. Production overheads incurred during the month amounted to Tk. 3,800. Completed jobs were delivered to customers as soon as they were completed, and the invoiced amounts were as follows.

Job 6832	Tk. 8,500
Job 6834	Tk. 9,000
Job 6835	Tk. 9,500

Administration and marketing overheads are added to the cost of sales at the rate of 20% of factory cost. Actual costs incurred during June 2017 amounted to Tk. 4,418.

**Required:**

- (i) Prepare the job accounts for each individual job during June 2017.
- (ii) Prepare the summarised job cost cards for each job, and calculate the profit on each completed job.

**[Marks: 3+4+(8+5) = 20]**

**= THE END =**