

**CMA DECEMBER, 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) Explain the concept of cost. How does it differ from expense and loss? Give examples.
- (b) Describe different methods for separating mixed costs into fixed and variable components.
- (c) Following are the particulars taken from the books of Xinxira Manufacturing Company for the year ended 31 December 2018:

Inventories:	1 January	31 December
Raw Materials	Tk. 50,000	Tk. 45,000
Work-In-Process	60,000	70,000
Finished Goods	55,000	45,000
Raw Materials Purchased (net)	Tk. 190,000	
Purchase Returns	20,000	
Sales Revenue	800,000	
Sales Returns	35,000	
Freight Out	30,000	
Labor (70% direct)	150,000	
Depreciation (60% factory)	50,000	
Sales Commission	60,000	
Factory Rent	40,000	
Factory Insurance	30,000	
Marketing Expenses	50,000	
Factory Utilities	20,000	
Factory Supplies	15,000	
Other Factory Expenses	15,000	
Office Supplies	10,000	

Requirements:

Prepare a cost of goods manufactured statement and an income statement for the year ended 31 December 2018.

[Marks: (4+4+12) = 20]

Q. No. 2

- (a) What is a linear cost function and what types of cost behaviour can it represent?
- (b) How is work-in-process inventory valued in accordance with IAS 2?
- (c) How does the difference between applied and actual factory overhead come about? If the difference is significant, how is it treated?
- (d) 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.

Requirements:

- (i) Use the EOQ model to determine the optimal number of pairs of shoes per order.
- (ii) 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?

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Q. No. 2(cont'd...)

- (e) The president of Mitul's Supply Company has provided the following data concerning the company's wood pulp inventory for the month of January. The company measures the ending inventory under the FIFO method.

January-1: Opening inventory: 1000 lb of wood pulp costing Tk. 5/lb

January-10: Purchased: 300 lb at Tk. 5.5/lb

January-16: Issued: 300 lb

January-26: Issued: 750 lb

January-28: Purchased: 400 lb at Tk. 6.0/lb

January-26: Issued: 350 lb

Requirements: Compute the cost of materials issued and the value of ending materials inventory.

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

Q. No. 3

- (a) What is the purpose of an incentive wage plan? In most incentive wage plans, does production above standard reduce the labor cost per unit of output? Discuss.
- (b) The company's union steward complained to the Payroll Department that several union members' wages had been miscalculated in the previous week. The following schedule indicates the wages conditions of the earnings of the workers involved.

Worker	Incentive Wage Plan	Total Hours	Downtime Hours	Units Produced	Standard Units	Base Rate	Gross Wages per Books
A	Straight piecework	40	5	400	-	Tk. 60	2,840
B	Straight piecework	46	-	455*	-	60	2,772
C	Straight piecework	44	4	420**	-	60	3,022
D	Percentage bonus plan	40	-	250	200	60	2,800
E	Percentage bonus plan	40	-	180	200	50	1,710
F	Emerson efficiency system	40	-	240	300	56	2,332
G	Emerson efficiency system	40	2	590	600***	56	2,800

* Includes 45 pieces produced during the 6 overtime hours.

** Includes 50 pieces produced during the 4 overtime hours. The overtime, brought about by the downtime, was necessary to meet a production deadline.

*** Standard units for 40 hours production.

The company's union contract contains the following description of systems for computing wages in various departments of the company. The minimum wage for a worker is the base rate, which is also paid for any downtime when the worker's machine is under repair or the there is no work. Workers are paid 150% of base rates for overtime production in a standard workweek of 40 hours.

- Straight piecework. The worker is paid at the rate of Tk. 6.6 per piece produced.
- Percentage bonus plan. Standard quantities of production per hour are established by the Engineering Department. The worker's average hourly production, determined from the total hours worked and the worker's production, is divided by the standard quantity of production to determine an efficiency ratio. The efficiency ratio is then applied to the base rate to determine the worker's hourly earnings for the period.
- Emerson efficiency system. A minimum wage is paid for the total hours worked. A bonus, calculated from the following table of rates, is paid when the worker's production exceeds 66.67% of standard output or efficiency. The bonus rate is applied only to wages earned during productive hours.

Efficiency	Bonus
Up to 66.67%	0
66.67 – 79%	10%
80 – 99%	20
100 – 125%	45

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Q. No. 3(cont'd...)

Requirements:

Prepare a schedule comparing each individual's gross wages per books with the gross wages calculated.

- (c) Taranagar Company uses labor standards in manufacturing its products. Based upon past experience, the company considers the effect of an 80% learning curve when developing standards for direct labor costs.

The company is planning the production of an automatic electrical timing device requiring the assembly of purchased components. Production is planned in lots of five units each. A steady-state production phase with no further increases in labor productivity is expected after the eighth lot. The first production lot of 5 units required 90 hours of direct labor time at a standard rate of Tk. 90 per hour.

Requirements:

Compute the standard amount the company should establish for the total direct labor cost required for the production of the first 8 lots.

[Marks: (5+10+5) = 20]

Q. No. 4

- (a) What methods can managers use to allocate costs of multiple support departments to operating departments?
- (b) How should managers dispose of under or over allocated manufacturing overhead costs at the end of the fiscal year?
- (c) KHUSTAR Company uses a normal job-order costing system. It processes most jobs through two departments. Selected budgeted and actual data for the past year are given below.

Data for one of several jobs completed during the year also follow.

	Department A	Department B
Budgeted overhead	Tk. 100,000	Tk. 500,000
Actual overhead	Tk. 110,000	Tk. 520,000
Expected activity (direct labor hours)	50,000	10,000
Expected machine hours	10,000	50,000

	Job 101
Direct material	Tk. 20,000
Direct labor cost	
Department A (5000 hrs @ Tk. 6 per hr)	30,000
Department B (1000 hrs @ Tk. 6 per hr)	6,000
Machine Hours used:	
Department A	100
Department B	1,200
Units produced	10,000

KHUSTAR Company uses a plant wide, predetermined overhead rate to assign overhead(OH) to jobs. Direct labor hours (DLH) is used to compute the predetermined overhead rate. KHUSTAR prices its jobs at cost plus 30 percent.

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Q. No. 4(cont'd...)

Requirements:

- (i) Compute the predetermined overhead rate.
- (ii) Using the predetermined rate, compute the per-unit manufacturing cost for Job 101.
- (iii) Assume that Job 101 was completed in May and sold in September. Prepare journal entries for the completion and sale of Job 101.
- (iv) Recalculate the unit manufacturing cost for Job 101 using departmental overhead rates. Use direct labor hours for department A and machine hours for department B. Does this approach provide a more accurate unit cost? Explain.
- (v) Assume that Job 101 was completed in May and sold in September. Using your work from Requirement 4, prepare journal entries for the completion and sale of Job 101.

[Marks: (4+3+13) = 20]

Q. No. 5

- (a) What do you mean by variance analysis? Is a favorable variance always positive for the organization? Explain.
- (b) How is the equivalent unit calculation affected when direct materials are added at the beginning or end of the process rather than uniformly throughout the process?
- (c) The S. Alam Company is a furniture manufacturer with two departments: molding and finishing. The company uses the weighted-average method of process costing. In August, the following data were recorded for the finishing department:

Units of beginning work in process inventory	12,500
Percentage completion of beginning work in process units	25%
Cost of direct materials in beginning work in process	0
Units started	87,500
Units completed	62,500
Units in ending inventory	25,000
Percentage completion of ending work in process units	95%
Spoiled units	12,500
Total costs added during current period:	
Direct materials	Tk. 819,000
Direct manufacturing labor	Tk. 794,500
Manufacturing overhead	Tk. 770,000
Work in process, beginning:	
Transferred-in costs	Tk. 103,625
Conversion costs	Tk. 52,500
Cost of units transferred in during current period	Tk. 809,375

Conversion costs are added evenly during the process. Direct material costs are added when production is 90% complete. The inspection point is at the 80% stage of production. Normal spoilage is 10% of all good units that pass inspection. Spoiled units are disposed of at zero net disposal value.

Requirements:

For August, summarize total costs to account for and assign these costs to units completed and transferred out (including normal spoilage), to abnormal spoilage, and to units in ending work in process.

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

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