

**CMA APRIL, 2019 EXAMINATION**  
**PROFESSIONAL LEVEL-II**  
**SUBJECT: 202. MANAGEMENT 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) If production exceeds sales, which method would you expect to show the higher net income, Absorption Costing or Variable Costing? Why?
- (b) Linden Company manufactures and sells a single product. Cost data for the product follows:

Variable costs per unit:

Direct materials.....	\$6
Direct labor .....	12
Variable factory overhead.....	4
Variable selling and administrative .....	<u>3</u>
Total variable costs per unit .....	<u>\$25</u>

Fixed costs per month:

Fixed manufacturing overhead.....	\$240,000
Fixed selling and administrative .....	<u>180,000</u>
Total fixed cost per month .....	<u>\$420,000</u>

The product sells for \$40 per unit. Production and sales data for May and June, the first two months of operations, are as follows:

	Units produced	Units sold
May	30,000	26,000
June	30,000	34,000

Income statements prepared by the Accounting Department, using absorption costing, are presented below:

	May	June
Sales	<u>\$10,40,000</u>	<u>\$ 13,60,000</u>
Less: Cost of goods sold:		
Beginning inventory	0	1,20,000
Add: Cost of goods manufactured	<u>9,00,000</u>	<u>9,00,000</u>
Goods available for sale	9,00,000	10,20,000
Less: Ending inventory	<u>1,20,000</u>	0
	<u>7,80,000</u>	<u>10,20,000</u>
Gross margin	2,60,000	3,40,000
Less: Selling and administrative expenses	<u>2,58,000</u>	<u>2,82,000</u>
Net operating Income	<u>\$2,000</u>	<u>\$58,000</u>

**Required:**

- (i) Determine the unit product cost under:
  - (1) Absorption costing.
  - (2) Variable costing.
- (ii) Prepare income statements for May and June using the contribution approach.
- (iii) Reconcile the variable costing and absorption costing net operating income figures.

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Q. No. 1(*cont'd...*)

- (iv) The company's Accounting Department has determined the break-even point to be 28,000 units, per month; computed as follows:

$$\frac{\text{Fixed cost per month}}{\text{CM per unit}} = \frac{\$ 420,000}{\$ 15} = 28,000 \text{ units}$$

Upon receiving this figure, the president commented, "There's something peculiar here. The controller says that the break-even point is 28,000 units per month. Yet we sold only 26,000 units in May and the income statement we received showed a \$2,000 profit. Which figure do we believe?" Prepare a brief explanation of what happened on the May income statement.

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

**Q. No. 2**

Roller, Ltd., of Melbourne, Australia, is the exclusive distributor in Australia and the South Pacific of a popular brand of in-line skates manufactured in Mexico. The company is in the process of putting together its cash budget for the second quarter-April, May, and June- of next year. The president of the company suspects that some financing will be required in the second quarter because sales are expanding and the company intends to make several major equipment purchases in that quarter. The president is confident that the company will be able to meet or exceed the following budgeted sales figures (all in Australian dollars) next year:

January	\$ 158,000	July	\$ 190,000
February	160,000	August	192,000
March	164,000	September	210,000
April	172,000	October	230,000
May	176,000	November	260,000
June	184,000	December	180,000

The following additional information will be used in formulating the cash budget:

- (1) All of the company's sales are on credit terms. The company collects 30% of its billings in the month after the sale and the remaining 70% in the second month after the sale. Uncollectible accounts are negligible.
- (2) The cost of sales is 75% of sales. Because of the shipping time from Mexico, the company orders skates from the manufacturer one month in advance of their expected sale. Roller, Ltd., desires to maintain little or no inventory.
- (3) The company orders the skates on credit terms from the manufacturer. The company pays half of the bill in the month after it orders the skates and the other half in the second month after it places the order.
- (4) Operating expenses, other than cost of sales, are budgeted to be \$178,800 for the year. The composition of these expenses is given below. All of these expenses are incurred evenly throughout the year except for the property tax. Property taxes are paid in four equal installments in the last month of each quarter.

Salaries and wages .....	\$ 120,000
Advertising and promotion .....	12,000
Property taxes .....	18,000
Insurance.....	4,800
Utilities.....	6,000
Depreciation.....	<u>18,000</u>
Total operating expenses.....	<u>\$ 178,800</u>

- (5) Income tax payments are made by the company in the first month of each quarter based on the taxable income for the prior quarter. The income tax payment due in April is \$16,000.

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

- (6) Because of expanding sales, the company plans to make equipment purchases of \$22,300 in April and \$29,000 in May. These purchases will not affect depreciation for the year.
- (7) The company has a policy of maintaining an end-of-month cash balance of \$20,000. Cash is borrowed or invested monthly, as needed, to maintain this balance. All borrowing is done at beginning of the month, and all investment; and repayments are made at the end of the month. As of March 31, there are no investments of excess cash and no outstanding loans.
- (8) The annual interest rate on loans from the bank is 12%. Compute interest on whole months (1/12, 2/12 and so forth). The company will pay off any loans, including accumulated interest at the end of the second quarter if sufficient cash is available.

**Required:**

- (i) Cash budget for Roller, Ltd., by month and in total for the second quarter.
- (ii) Discuss why cash budgeting is particularly important for an expanding company like Roller, Ltd.

**[Marks: (15+5) = 20]**

**Q. No. 3**

- (a) "A customer profitability profile highlights those customers who should be dropped to improve profitability" Do you agree? Explain
- (b) Reliable Medicines Supplier (RMS) is a distributor of pharmaceutical products. Its ABC system has five activities:

<u>Activity Area</u>	<u>Cost driver rate in 2018</u>
1. Order processing	Tk. 400 per order
2. Line-item ordering	Tk. 30 per line time
3. Store deliveries	Tk. 500 per store delivery
4. Carton deliveries	Tk. 10 per carton
5. Shelf-stocking	Tk. 160 per stocking hour

The controller of RMS wants to use ABC system to examine individual customer profitability within each distribution market. He focuses first on the Ma and Pa single-store distribution market. Two customers are used to exemplify the insights available with the ABC approach. Data pertaining to these two customers in August 2018 are as follows:

	Chemist Pharmacy	Patent Pharmacy
Total orders	12	10
Average line items per order	10	18
Total store deliveries	6	10
Average cartons sent per store delivery	24	20
Average hours of shelf stocking per store delivery	0	0.5
Average revenue per delivery	Tk. 24,000	Tk. 18,000
Average cost of goods sold per delivery	Tk. 21,000	Tk. 16,500

**Required:**

- (i) Use the ABC information to compute the operating income of each customer in August 2018. Comment on the results.
- (ii) The Controller ranks the individual customers in the Ma and Pa single-store distribution market on the basis of monthly operating income. The cumulative operating income of the top 20% of customers is Tk. 5,56,800. RMS reports negative operating income of Tk. 2,12,470 for the bottom 40% of its customers. Make four recommendations that you think RMS should consider in light of this new customer profitability information.

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

**Q. No. 4.**

- (a) The Nikash Limited, a toy company manufactures a line of dolls and a doll dress sewing kit. Demand for the dolls is increasing, and management requests assistance from you in determining an economical sales and production mix for the coming year. The company has provided the following data:

Product	Demand next year (Units)	Selling price per unit (Taka)	Direct Materials Per unit (Taka)	Direct Labor Per unit (Taka)
Dolly	50,000	13.50	4.30	3.20
Tara	42,000	5.50	1.10	2.00
Sarah	35,000	21.00	6.44	5.60
Mike	40,000	10.00	2.00	4.00
Sewing kit	325,000	8.00	3.20	1.60

- (1) The company's plant has a capacity of 130,000 direct labor-hours per year on a single-shift basis. The company's present employees and equipment can produce all five products.
- (2) The direct labor rate of Tk. 8 per hour is expected to remain unchanged during the coming year.
- (3) Fixed costs total Tk. 520,000 per year. Variable overhead costs are Tk. 2 per direct labor-hour.
- (4) All of the company's nonmanufacturing costs are fixed.
- (5) The company's finished goods inventory is negligible and can be ignored.

**Required:**

- (i) Determine the contribution margin per direct labor-hour expended on each product.
  - (ii) Prepare a schedule showing the total direct labor-hours that will be required to produce the units estimated to be sold during the coming year.
  - (iii) Examine the data you have computed in (i) and (ii) above. How would you allocate the 130,000 direct labor hours of capacity to Nikash Limited's various products?
  - (iv) What is the highest price, in terms of a rate per hour, that Nikash Limited would be willing to pay for additional capacity (that is, for added direct labor time)?
  - (v) Assume again that the company does not want to reduce sales of any product. Identify ways in which the company could obtain the additional output.
- (b) SuperStar Packers Ltd. is a major processor of beef and other meat products. The company has a large amount of T-bone steak on hand, and it is trying to decide whether to sell the T-bone steaks as they are initially cut or to process them further into filet mignon and the Dhakaiya cut. If the T-bone steaks are sold as initially cut, the company figures that a 1-pound T-bone steak would yield the following profit:

	Taka
Selling price (Tk. 2.25 per pound) . . . . .	2.25
Less: joint costs incurred up to the split-off point where T-bone steak can be identified as a separate product . . . . .	<u>(1.80)</u>
Profit per pound . . . . .	<u>0.45</u>

As mentioned above, instead of being sold as initially cut, the T-bone steaks could be further processed into filet mignon and Dhakaiya cut steaks. Cutting one side of a T-bone steak provides the filet mignon, and cutting the other side provides the Dhakaiya cut. One 16-ounce T-bone steak cut in this way will yield one 6-ounce filet mignon and one 8-ounce Dhakaiya cut; the remaining ounces are waste. The cost of processing the T-bone steaks into these cuts is Tk. 0.25 per pound. The filet mignon can be sold for Tk. 4.00 per pound, and the Dhakaiya cut can be sold for Tk. 2.80 per pound.

**Required:**

- (i) Determine the profit per pound from processing the T-bone steaks into filet mignon and Dhakaiya cut steaks.
- (ii) Would you recommend that the T-bone steaks be sold as initially cut or processed further? Why?

**[Marks: (5+3+2+2+2) + (4+2) = 20]**

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**Q. No. 5.**

ISM Baking Company has developed a reputation for producing superb, one-of-a-kind wedding cakes in addition to its normal fare of breads and pastries. While the wedding cake business is a major moneymaker, it creates some problems for the bakery's owner, Ms. Jahan, particularly in June. The company's reputation for wedding cakes is largely based on the skills of Ms. Zasia Zerin, who decorates all of the cakes. Unfortunately, last year the company accepted too many cake orders for some June weekends, with the result that Zerin was worked to a frazzle and almost quit. To prevent a recurrence, Ms. Jahan has promised Zerin that she will not have to work more than 33 hours in any week to prepare the wedding cakes for the upcoming weekend. (Zerin also has other duties at the bakery, so even with the 33-hour limitation, she would be working more than full-time in June.)

A number of reservations for wedding cakes for the first weekend in June had already been received from customers by early May. When a customer makes a reservation, Ms. Jahan gets enough information concerning the size of the wedding party and the desires of the customer to determine the cake's price, the cost to make it, and the amount of time that Zerin will need to spend decorating it. The reservations for the first weekend in June are listed below:

<u>Customer</u>	<u>Incremental Profit (Taka)</u>	<u>Zerin's Time Required (hours)</u>
Aklima.....	140	4
Tithi.....	124	4
Ayesha.....	160	5
Wasi.....	96	3
Jasia .....	190	5
Hussein.....	288	8
Ibrahim.....	93	3
Jerry.....	136	4
Kiran .....	234	6
Keya.....	204	6
Total.....	<u>1,665</u>	<u>48</u>

For example, the Aklima's cake would require 4 hours of Zerin's time and would generate a profit of Tk. 140 for the bakery. Following industry practice, pricing for the cakes is based on their size and standard formulas and does not reflect how much decorating would be required.

**Required:**

- (i) Ms. Jahan feels that she must cancel enough cake reservations to reduce Zerin's workload to the promised level. She knows that customers whose reservations have been cancelled will be disappointed, but she intends to refer all of those customers to an excellent bakery across town. If the sole objective is to maximize the company's total profit, which reservations should be cancelled?
- (ii) What would be the total profit if your recommendation in part (i) above is followed?
- (iii) Assume that for competitive reasons it would not be practical for ISM Bakery to change the pricing of its wedding cakes. What recommendations would you make to Ms. Jahan concerning taking reservations in the future?
- (iv) Assume that ISM Bakery could change the way it prices its wedding cakes. What recommendations would you make to Ms. Jahan concerning how she should set the prices of wedding cakes in the future?
- (v) What might Ms. Jahan be able to do to keep both Zerin and her customers happy while increasing her profits? Be creative.

[Marks: (6+3+4+3+4) = 20]

= THE END =