



THE INSTITUTE OF COST AND MANAGEMENT ACCOUNTANTS OF BANGLADESH
CMA JUNE, 2018 EXAMINATION
BUSINESS LEVEL

SUBJECT: GE 02. FUNDAMENTALS OF 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) How to apply budgetary control as 'Management by Exception' tool? In a participating budget process, management may indulge the targets in favor of them. What type of precautionary measure should be undertaken to keep the process protected in such a situation?
- (b) During a particular year, overhead was over-applied by Tk. 50,000. Critically evaluate the impact of this over application on the net income figure for the year. Should the actual net income be higher than budgeted net income?
- (c) The Octopi Lawn Chair Company produces and sells a single high-priced lawn chair and in 2017 the company produced and sold 30,000 units. The 2017 income statement of the company reported the following:

Robinson Lawn Chair Company
Income Statement
For the year ended on December 31st, 2017

Particulars	Amount (Tk.)
Sales	18,00,000
Variable costs	13,50,000
Contribution Margin	4,50,000
Fixed costs	2,40,000
Income before taxes	2,10,000
Tax expense	63,000
Income after taxes	1,47,000

Required:

- (i) Calculate the per unit figures for each relevant item from the information provided above.
- (ii) Compute the breakeven point in units for the year 2017.
- (iii) Determine the company's margin of safety in units for the year 2017.
- (iv) Determine the company's degree of operating leverage at the current level of operations. If the company's sales in units were to increase 30%, how much would profits before taxes increase in percentage terms?
- (v) Compute the sales level required in units to achieve a level of profits before taxes of Tk. 2,70,000.
- (vi) Based on the original data above, determine the sales level required if the company desires a profit after taxes of Tk. 2,10,000. It is believed that the tax rate will remain at current levels.
- (vii) Refer to the original data above, assume the company is expecting to experience a shortage of its main raw material. This situation is expected to result in an increase in the company's manufacturing costs of Tk. 3 per unit. Under this circumstance, and assuming that the company does not believe that it can increase its selling price, determine the company's breakeven point and new safety margin.
- (viii) Refer to the original data above, management has decided to raise the price of its product to Tk. 65 per unit. It also will spend an additional Tk. 1,02,000 per year for advertising. Although it has never paid commissions before, the company has decided to begin paying sales personnel Tk. 1 per unit for every unit sold. Determine the new breakeven point. Also determine the safety margin of the company under this plan if sales only reach 27,000 units.

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

Q. No. 2

- (a) Variable cost per unit is a very important piece of information whereas fixed cost per unit is used very rarely or cautiously. What type of worse decision a company may undertake by using fixed cost per unit data?
- (b) Two costs at Walco appear below for two months of operations. Determine the type of cost behavior for each cost and briefly justify your choice.

Cost	Month	Cost	Units Produced
Copying costs	March	Tk. 9,604	9,800
	April	Tk. 8,064	8,400
Communications costs	March	Tk. 6,080	800
	April	Tk. 5,168	680

- (c) UV Ltd presents the following information for November 2017:

Budgeted production of Product P = 200 units

Standard consumption of Raw Materials = 2 kg per unit of P

Standard price of material A = Tk. 6 per kg.

Actually, 250 units of P were produced and material A was purchased at Tk. 8 per kg and consumed at 1.8 kg per unit of P. Calculate the material cost variances showing the breakdown of price and usage variances.

[Marks: (5+8+7) = 20]

Q. No. 3

- (a) What is pre-determined overhead rate? How to deal with under/over applied factory overhead?
- (b) Belti Ltd. Manufactures the specialized water filter. The budgeted overhead based on normal activity levels are as follows:

Production Departments	Budgeted Overhead	Budgeted Activity
Melting	Tk. 10,000	2,500 Labor Hours
Assembly	Tk. 30,000	3,000 Labor Hours

Selling and administrative overheads are 25% of factory cost. An order for 500 filters, identified as batch-50, incurred the following costs;

Materials	Tk. 24,000
Labor	200 hours in the Melting department at Tk. 5 per hour 400 hours in the Assembly department at Tk. 10 per hour

Tk. 1,000 is paid for renting testing equipment for the quality testing of filters in batch-50.

Required:

Calculate the cost per unit for Batch 50.

- (c) Why flexible budget is important? Does flexible budget have any relationship with participative budgeting? Explain.
- (d) HiPen Company Ltd Manufactures and Markets Laptop Mouse A and Mouse B. During 2016 Hipen marketing managers project monthly sales 4,00,000 Mouse A and 1,00,000 Mouse B. Average selling prices are estimated at Tk. 2.5 per Mouse A and Tk. 4.5 Mouse B. HiPen begins 2016 with 9,00,000 units Mouse A inventory. The Operation Manager requests that Mouse A's ending inventory on December 31, 2016 be no less than 6,00,000 units Mouse.

CMA JUNE, 2018 EXAMINATION
 BUSINESS LEVEL
 SUBJECT: GE 02. FUNDAMENTALS OF MANAGEMENT ACCOUNTING

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

The Operation Manager also requests that ending inventory of Mouse B on December 31, 2016 be 2,00,000 units and the production budget of Mouse B to produce 13,00,000 units during 2016.

Required:

- (i) Prepare a revenue budget for the year 2016.
- (ii) Prepare the production budget of Mouse A for the year 2016.
- (iii) What will be the beginning Inventory of Mouse B at 1 January 2016 for the above situation?

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

Q. No. 4

- (a) Differentiate between relevant and irrelevant costs and benefits. Why these differences are important to an informed decision maker in business?
- (b) Oxford Engineering manufactures small engines. The engines are sold to manufacturers who install them in such products as lawn mowers. The company currently manufactures all the parts used in these engines but is considering a proposal from an external supplier who wishes to supply the starter assemblies used in these engines. The starter assemblies are currently manufactured in Division 3 of Oxford Engineering. The costs relating to the starter assemblies for the past 12 months were as follows:

Direct materials	Tk. 2,00,000
Direct manufacturing labor	Tk. 1,50,000
Manufacturing overhead	Tk. 4,00,000
Total	Tk. 7,50,000

Over the past year, Division 3 manufactured 1,50,000 starter assemblies. The average cost for each starter assembly is Tk. 5 (=Tk. 7,50,000 / 1,50,000). Further analysis of manufacturing overhead revealed that only 25% of the total manufacturing overhead is considered variable. Of the fixed portion, Tk. 1,50,000 is an allocation of general overhead that will remain unchanged for the company as a whole if production of the starter assemblies is discontinued. A further Tk. 1,00,000 of the fixed overhead is avoidable if production of the starter assemblies is discontinued. The balance of the current fixed overhead, Tk. 50,000, is the division manager's salary. If production of the starter assemblies is discontinued, the manager of Division 3 will be transferred to Division 2 at the same salary. This move will allow the company to save the Tk. 40,000 salary that would otherwise be paid to attract an outsider to this position.

The variable costs required to manufacture 1,50,000 starter assemblies are:

Direct Materials	Tk. 2,00,000
Direct Manufacturing Labor	Tk. 1,50,000
Variable Manufacturing Overhead	Tk. 1,00,000
Total Variable Costs	Tk. 4,50,000

The variable cost per unit is Tk. 3. Tidnish Electronics, a reliable supplier, has offered to supply starter-assembly units at Tk. 4 per unit. Because this price is less than the current average cost of Tk. 5 per unit, the vice president of manufacturing is eager to accept this offer. However, the general manager points out that this price is much higher than the variable cost per unit of Tk. 3 within sourcing, so she recommends against buying from Tidnish. Who is correct?

How, if at all, would the answer change if the company could use the vacated plant space for storage and, in so doing, avoid Tk. 50,000 of outside storage charges currently incurred?

[Marks: (5+15) = 20]

Q. No. 5

- (a) What role does a management accountant play in long term investment decision? Explain the other roles of management accountants in business in line with the definition provided by IFAC.
- (b) **Walton Electronics** is thinking of replacing its existing machine by a new machine, which would cost Tk. 60 lakhs. The company's current production is 80,000 units, and is expected to increase to 1,00,000 units, if the new machine is bought. The selling price of the product would remain unchanged at Tk. 200 per unit. The following is the cost of producing one unit of product using both the existing and new machine.

	Existing Machine (80,000 units)	New Machine (1,00,000 units)	Unit cost Difference
Materials	Tk. 75	Tk. 63.75	Tk. -11.25
Wages & salaries	51.25	37.5	-13.75
Supervision	20	25	5
Repairs & maintenance	11.25	7.5	-3.75
Power & Fuel	15.5	14.25	-1.25
Depreciation	0.25	5	4.75
Allocated corporate overheads	10.0	12.5	2.5
	<u>Tk. 1,83.25</u>	<u>Tk. 1,65.50</u>	<u>Tk. 17.75</u>

The existing machine has a book value of Tk. 1,00,000, and it has been fully depreciated for tax purpose. It is estimated that machine will be useful for 5 years. The supplier of the new machine has offered to accept the old machine for Tk. 2,50,000. However, the market price of old machine today is Tk. 1,50,000 and it is expected to be Tk. 35,000 after 5 years. The new machine has a life of 5 years and a salvage value of Tk. 2,50,000 at the end of its economic life. Assume corporate income-tax rate at 40%, and depreciation is charged on straight-line basis for income-tax purposes. Further assume that book profit is treated as ordinary income for tax purpose. The opportunity cost of capital of the company is 15%.

Year (t)	1	2	3	4	5
PVIF _{0.15,t}	0.8696	0.7561	0.6575	0.5718	0.4972
PVIF _{0.20,t}	0.8333	0.6944	0.5787	0.4823	0.4019
PVIF _{0.25,t}	0.8	0.64	0.512	0.4096	0.3277
PVIF _{0.30,t}	0.7692	0.5917	0.4552	0.3501	0.2693
PVIF _{0.35,t}	0.7407	0.5487	0.4064	0.3011	0.223

Required:

Estimate net present value of the replacement decision. Should company go ahead with the replacement decision? Suggest.

[Marks: (5+15) = 20]

= THE END =