SOMAIYA VIDYAVIHAR UNIVERSITY

Semester: June – Oct 24 **Maximum Marks: 50 Examination: ETE Exam Date: 05/11/2024 Duration: 2 hours**		
Programme code: 01 **Programme: MBA**	**Class: FY**	**Semester: I**
College: K. J. Somaiya Institute of Management	**Name of the department/Section/Center:** **Finance & Law**	
Course Code: 317P01C102	**Name of the Course: Cost Management & Control**	
Instructions: 1. Question 1 is compulsory **2. Answer ANY THREE from the rest**		

SET A

Question 1 (14 marks)

Brightwave Electronics Ltd is a mid-sized company engaged in the manufacturing of electronic components used in consumer devices like smartphones, tablets, and laptops. The company has been in operation for over 10 years and is known for producing high-quality components at competitive prices. In recent years, the company has faced increasing pressure from rising material costs and labor shortages, which have driven up production expenses.

The company operates from a single large manufacturing facility, and its production process involves multiple stages including material sourcing, assembly, and quality control. Each of these stages has associated direct material, labor, and chargeable expenses. Brightwave Electronics also has significant overhead costs related to factory operations, office administration, and selling efforts.

Financial Data for the Year Ended 31st December, 2022

As of the end of 2022, Brightwave Electronics Ltd's cost structure is as follows:

- Direct Material: ₹42 per unit
- Direct Labour: ₹33 per unit
- Direct Expenses: ₹15 per unit
- Factory Overheads:
  - Fixed: ₹18,00,000
  - Variable: ₹12 per unit
- Office Overheads:
  - Fixed: ₹14,00,000
- Selling Overheads:
  - Fixed: ₹6,00,000
  - Variable: ₹30 per unit
- Units Produced and Sold: 60,000 units
- Selling Price: ₹250 per unit

The company produced and sold 60,000 units in the year 2022, and the management is satisfied with the company's performance but is now anticipating significant changes for the upcoming year.

Anticipated Changes for the Year Ending 31st December, 2023

The management team at Brightwave Electronics is facing various operational and market challenges for the year 2023. Based on industry forecasts and internal analysis, the following changes are anticipated:

Increased Production and Sales: The company expects demand for its products to rise, and as a result, it plans to increase production and sales by 50%.

Material Cost Increase: Due to the rising cost of raw materials globally, the cost of direct material per unit is expected to increase by 15%.

Labor Cost Reduction: The company has recently implemented efficiency measures in its production process. These improvements are expected to reduce direct labor cost per unit by 8%.

Direct Expenses Decrease: Automation and digital tools have allowed the company to reduce its chargeable expenses by 12% per unit.

Variable Factory Overheads Increase: Energy costs and maintenance expenses have risen sharply. As a result, variable factory overheads per unit are projected to increase by 30%.

Selling Overheads Increase: Marketing expenses and sales commissions will rise due to more aggressive market expansion, leading to a 20% increase in variable selling overheads per unit.

Increase in Fixed Overheads: With the company expanding its office operations and hiring new administrative staff, all fixed overheads are expected to rise by 18%.

The senior management team at Brightwave Electronics Ltd is seeking to assess the impact of these changes on the company's overall profitability and cost structure. As a financial consultant, you have been asked to help the team address the following:

1.Determine the total cost per unit for the year 2022 and calculate the total cost for the company, including direct material, labor, chargeable expenses, and all overheads.

2.Calculate the revised cost per unit for the year 2023 after factoring in the anticipated changes (e.g., increases in material costs, changes in labor costs, and overhead changes).

3.Estimate the total profit for 2023 assuming the company increases production and sales by 50% as planned.

4.Given the increase in both fixed and variable costs, should the company consider increasing its selling price to maintain profitability? If so, by how much should the price increase to cover the additional costs?

Question 2 (12 marks)

Prepare a Cash Budget for six months ending 30 August 2023.

Months	Sales(Rs)	Materials(Rs)	Wages(Rs)	Overheads(Rs)
February	14,000	9,600	3,000	1,700
March	15,000	9,000	3,000	1,900
April	16,000	9,200	3,200	2000
May	17,000	10,000	3,600	2,200
June	18,000	10,400	4,000	2,300
July	20,000	11,000	3,800	2,100
August	22,000	10,800	4,100	2,400

Credit terms are as follows:-

1)Cash Sales is 15% of sales ,Credit sales 85%. 60% of credit sales are collected in the next month and the balance in the following month.

2) Suppliers are paid after 1 month for materials purchased.

3) Wages paid as incurred.

4) Overheads paid 50% in the same month and Balance in next month

5) Opening cash balance for the month of April is Rs 60,000/-.

Question 3 (12 marks)

A retail dealer in plastics is currently selling 24000 pieces annually .

He supplies the following details for the year ended 31st Dec 2023.

Particulars	Rs.
Selling price per item	40
Variable cost per item	25
Fixed cost:	
-Staff salaries for the year	1,20,000
-General office cost	80,000

-Advertising cost 40,000

As an advisor of the firm, you are required to answer the following each part independently.

a)Calculate the break –even point and margin of safety in sales revenue and number of pieces sold.

b)Assume that 20,000 pieces were sold in a year, Find out the net profit of the firm.

c) If it is decided to introduce selling commission of Rs. 3 per piece, how many would require to be sold in a year to earn a net income of Rs.15,000?

d) Assuming that for the year 2024, an additional staff salary of Rs.33,000 is anticipated, and price of a piece is likely to be increased by 15 %, what should be the break – even point in number of pieces and sales revenue?

Question 4 (12 marks)

XYZ Printing Ltd. is a printing company that produces various types of printed products, including brochures and business cards. The company has identified the following overhead (OH) cost pools and cost drivers to allocate its overheads more accurately using Activity-Based Costing (ABC).

Cost Pools and Cost Drivers:

Cost Pools	Activity Costs (Rs)	Cost Driver	Driver Consumption
Printing Setup	Rs 4,20,000	Setup Hours	3,500 hours
Materials Handling	Rs 1,50,000	Handling Hours	20,000 hours
Machine Power (Electric)	Rs 50,000	Kilowatt Hours	50,000 hours

XYZ Printing Ltd. specializes in producing brochures and business cards, and the following cost and activity information pertains to these two products:

Product Cost Information:

Product	Brochures	Business Cards
Units Produced	10,000	5,000
Direct Cost of Paper	Rs 60,000	Rs 45,000
Direct Labour Cost	Rs 50,000	Rs 30,000
Setup Hours	300 hours	150 hours
Handling Hours	4,000 hours	2,000 hours
Kilowatt Hours	5,000 hours	3,000 hours

As a financial analyst, your objective is to calculate the unit cost for each product using the Activity-Based Costing (ABC) approach. This includes allocating overhead costs based on cost drivers and calculating the total cost for each product.

Question 5 (12 marks)

Write Short Notes on ANY 3

a) Responsibility Centres

b) Master Budget

c) Margin of Safety.

d) Direct and Indirect Costs.