K. J. SOMAIYA INSTITUTE OF MANAGEMENT STUDIES AND RESEARCH
Vidyavihar, Mumbai- 400077
Program: *PGDM Executive (Batch 2017-18), Trimester I*
Subject: Cost Modeling & Strategic Cost Management
(End Term Examination)

Maximum Marks: 50 **Duration: 3 hours** **Date: 13th December, 2017**

Instructions:
1. **Answers written in pencil shall not be accepted and will invoke negative marking.**
2. **Cancellation of any answer is to be done in pen only.**
3. **Usage of pen color other than black and blue is strictly prohibited.**

Question 1: Fill in the Blanks. Each blank carries 1 mark **10 Marks**

Q.1a A customer asks for a discount on services being bought from a vendor. The value of the services stands at Rs. 45, 000 for 500 units purchased. A discount of 2% per unit was given by the vendor. The rate per unit now stands at _______________.

Q.1b The classification of costs element wise is __________, ___________ & ____________.

Q.1c Identify the cost elements (i.e. if classified element wise) from the below mentioned examples:
- Cost of cloth material used in uniforms of admin and support staff: ________________.
- Payment to workers engaged at a construction site: _______________.
- Rent of crane hired specially to load containers onto a ship: ___________________.
- Salary to Managers and Supervisors, Finance & Accounting personnel involved in daily activities of an organization: _________________.

Q.1d While making a Bill of Material sheet, the rate per unit of a material applicable to the product under making is computed on the basis of
i) Market Procurement rate ii) Standard quantity of material required iii) Tax on material purchase
a) Both i) & ii) b) Only ii) & iii) c) Either i) or iii) d) i), ii) & iii)
The correct option is _________.

Q.1e A media company is charged by the broadcaster at a rate of Rs. 1, 00,000 per second of an advertisement being broadcasted. The contract has a cancellation charge of Rs. 60, 000 per incidence of broadcast if the advertisement is pulled out by the company. The broadcasting charges spend by the company can be best classified as ___________________ costs (Fixed/Variable/Semi-variable).

Q.2 Anamika Spices ltd. has launched 2 products named TEEKHI and TURI in the market. Management of the company has the option to alter the sales mix (no. of units sold) of the products as per the following information:

OPTION	I	II	III	IV
TEEKHI	400	800	-	550
TURI	300	-	600	250

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Per unit production cost and sales data is as follows:

	Direct Material (Rs.)	Direct Labor (Hrs.)	Variable Factory Overhead (Rs.)	Sales (Rs.)
TEEKHI	40	10	10	150
TURI	55	12	12	180

Direct Material, direct labour and factory overheads stated above are all variable in nature. Labour rate is Rs. 4 per hour. Common fixed overheads for both products are Rs. 20, 000. Evaluate the options to identify the most profitable sales mix. **10 Marks**

OR

Q.2: A product is obtained after it is processed through 3 different processes. Cost information available for this operation is as follows:

	Materials (Rs.)	Direct Wages (Rs.)	Production Overheads (Rs.)
Process I	5,900	3,600	6,000
Process II	4,000	5,480	4,050
Process III	2,500	2,240	1,400
Total	12,400	11,320	11,450

2000 units at Rs. 4 per unit were introduced in Process I. The actual output and normal loss of the respective processes are as in the table below.

	Process I	Process II	Process III
Output Units	1800	1360	1080
Normal Loss on Input	10%	20%	25%
Value of scrap per unit Rs.	3	5	6

Compute the three process accounts. **10 Marks**

Q.3 Consider the following set of inputs: Selling price: Rs. 25 per unit, Variable Cost: Rs. 20 per unit, Fixed Costs: Rs. 20,000. Number of units: 2,500 at 80% utilization levels. Compute: Total Sales, Total Variable costs, total Contribution and total profitability at 80%, 90% and 100% capacity utilization levels. **10 Marks**

OR

Q.3 (i) Explain classification of costs based on a) Behavior b) Element-wise (ii) derive the formula for Break-Even Point. **10 Marks**

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Q.4: Prepare a flexible budget ranging from 50 hours to 70 hours in steps of 10 hours based on the following inputs: **10 Marks**

Level of Activity	10 hours	40 hours
Warehousing costs	2, 00, 000	4, 50, 000
Admin Costs	6, 25, 000	8, 25, 000
Advertising Charges	18, 00,000	24, 00, 000

Q.5 A food packet (lunch box) consists of following items: Chocolate Muffin, Sandwiches, Wafers and a Mineral Water Bottle. Chocolate Muffins are prepared in-house whereas all other items are procured from outside. Procurement details are as available in the Description column of the table below. (Note: Maida, Baking soda, Butter, Essence, Chocolate powder, Condensed milk and Sugar are used for making muffins. Remaining items such as Sandwiches, Wafers, Waters, etc. are directly procured from outside):

For making one unit:

Particulars	Description	Quantity				Price per unit of material/ expense						Rate per box
		Std. Qty	Units	%ge Loss	Std. Qty (including losses)	Base Rate	Tax	Carriage Inwards	Other Charges	Total	Total rate per unit of purchase	
1. Chocalate Muffin												
Maida	50 gms for 1 muffin, 31 Rs per kg	50.00	gm	0%	50.00	31.00	-	1.00	-	32.00	0.032	1.60
Baking soda	5 gms for 1 muffin, 60 Rs. per kg		gm									
Butter	50 gms for 1 muffin, Rs. 100 per 500 gms		gm									
Essence	2 ml for 1 muffin, Rs. 50 per 100 ml bottle		ml									
Chocolate powder	20 gms for 1 muffin, Rs 50 per 250 gm pack		gm									
Condensed milk	50 ml for 1 muffin, Rs. 50 per liter		ml									
Sugar	40 gms for 1 muffin, Rs. 35 per kg		gm									
2. Sandwiches	1 per box, Rs. 15 per piece		per box									
3. Wafers	1 packet serves 10 lunch boxes, Rs. 300 for 10 packe		Packet									
4. Mineral water bottle	1 per box, Rs. 100 for 10 bottles of 500ml each		bottle									
5. Box (Including Brand printing)	1 per box, Rs. 500 for 100 boxes		per box									
6. Paper bags	1 per box, Rs. 400 for 200 pieces		per box									
7. Marketing Pamphlet	1 per box, Rs. 1000 for 1000 pamphlets		per box									
										Total		

Assuming 5% quantity losses for Maida, Baking soda and chocolate powder and zero for all other items, zero taxes for all items, Rs. 1 as carriage inwards per pack for all edible items (excluding mineral water) procured, complete the above BOM for the aforesaid food packet. (You can refer to the template and sample calculation given above as reference). If the base rate of Sugar goes up by 10% and that of Chocolate powder falls by 15%, calculate the revised cost per food packet. **10 Marks**