

Chapter-wise Test (1012)
Marginal costing

Instructions

- All questions are compulsory.
- Test Duration will be one hour and 10 minutes, starting from 11:00 AM to 12:10 PM
- 5 minutes of reading time will be provided before 11, i.e. question paper will be shared by 10:55 AM.
- Share your scanned answer sheets by 12:15 on the below link
<https://forms.gle/wLRZWiTvMELNpCeC6>
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1. X Ltd. supplies spare parts to an air craft company Y Ltd. The production capacity of X Ltd. facilitates production of any one spare part for a particular period of time. The following are the cost and other information for the production of the two different spare parts A and B:

	Part A	Part B
Per unit		
Alloy usage	1.6 kgs.	1.6 kgs.
Machine Time: Machine P	0.6 hrs	0.25 hrs.
Machine Time: Machine Q	0.5 hrs.	0.55 hrs.
Target Price (₹)	145	115
Total hours available	Machine P 4,000 hours	Machine Q 4,500 hours
Alloy available is 13,000 kgs. @ ₹ 12.50 per kg.		
Variable overheads per machine hours		Machine P: ₹ 80 Machine Q: ₹ 100

Required

- (i) IDENTIFY the spare part which will optimize contribution at the offered price.
- (ii) If Y Ltd. reduces target price by 10% and offers ₹ 60 per hour of unutilized machine hour, CALCULATE the total contribution from the spare part identified above?

[8 Marks]

2. MNP Ltd sold 2,75,000 units of its product at ₹ 375 per unit. Variable costs are ₹ 175 per unit (manufacturing costs of ₹ 140 and selling cost ₹ 35 per unit). Fixed costs are incurred uniformly throughout the year and amount to ₹ 3,50,00,000 (including depreciation of

₹ 1,50,00,000). there are no beginning or ending inventories.

Required:

- (i) COMPUTE breakeven sales level quantity and cash breakeven sales level quantity.
- (ii) COMPUTE the P/V ratio.
- (iii) COMPUTE the number of units that must be sold to earn an income (EBIT) of 25,00,000.
- (iv) COMPUTE the sales level achieve an after-tax income (PAT) of ₹ 25,00,000. Assume 40% corporate Income Tax rate. **(7 marks)**

3. RPP Manufacturers is approached by an international customer for one-time special order similar to one offered to its domestic customers. Per unit data for sales to regular customers is provided below:

Direct material	693
Direct labour	315
Variable manufacturing support	504
Fixed manufacturing support	<u>1092</u>
Total manufacturing costs	2604
Markup (50%)	<u>1302</u>
Targeted selling price	<u>3906</u>

It is provided that RPP Manufacturers has excess capacity.

Required:

- (i) WHAT is the full cost of the product per unit?
- (ii) WHAT is the contribution margin per unit?
- (iii) WHICH costs are relevant for making the decision regarding this one-time special order? WHY?
- (iv) For RPP Manufacturers, WHAT is the minimum acceptable price of this one-time-special order only

For this one-time-only special order, SHOULD RPP Manufacturers consider a price of ₹ 2100 per unit? WHY or why not? **[5 Marks]**

4. During a particular period ABC Ltd has furnished the following data:

Sales Rs. 10,00,000

Contribution to sales ratio 37% and

Margin of safety is 25% of sales.

A decrease in selling price and decrease in the fixed cost could change the "contribution to sales ratio" to 30% and "margin of safety" to 40% of the revised sales. Calculate:

- (i) Revised Fixed Cost.
 (ii) Revised Sales and
 (iii) New Break-Even Point.

[5 Marks]

5. An agriculture based company having 210 hectares of land is engaged in growing three different cereals namely, wheat, rice and maize annually. The yield of the different crops and their selling prices are given below:

	Wheat	Rice	Maize
Yield (in kgs per hectare)	2,000	500	100
Selling Price (₹ per kg)	20	40	250

The variable cost data of different crops are given below:

(All figures in ₹ per kg)

	Crop Labour charges	Packing Materials	Other variable expenses
Wheat	8	2	4
Rice	10	2	1
Maize	120	10	20

The company has a policy to produce and sell all the three kinds of crops. The maximum and minimum area to be cultivated for each crop is as follows:

Crop	Maximum Area (in hectares)	Minimum Area (in hectares)
Wheat	160	100
Rice	50	40
Maize	60	10

You are required to:

- (i) Rank the crops on the basis of contribution per hectare.
- (ii) Determine the optimum product mix considering that all the three cereals are to be produced.

Calculate the maximum profit which can be achieved if the total fixed cost per annum is ₹ 21,45,000.

[7 Marks]

3 MCQ (Each Carry 1 marks)

Question 1:

Prow shirts Ltd. Manufacturers three types of shirts standard, premium and elite. The unit selling price of these shirts are ₹ 500, ₹ 800 and ₹ 1200 respectively. The corresponding unit variable costs are ₹ 300, ₹ 500 and ₹ 600. The proportions (quantity-wise) in which these products are manufactured and sold are 50%, 30% and 20% respectively. Total fixed costs are ₹ 60,00,000. Overall breakeven quantity is

- (a) 19,453 Units
- (b) 19,354 Units
- (c) 18,194 Units
- (d) 19,153 Units

Question 2:

The fixed expenses are ₹ 64,000 and the break-even point is ₹ 1,60,000. The new break-even point, if the selling price is reduced by 10% is

- (a) ₹ 1,60,000
- (b) ₹ 1,82,000
- (c) ₹ 1,92,000
- (d) ₹ 2,00,000

Question 3:

If P/V ratio is 40% of sales then what about the remaining 60% of sales:

- (a) Profit.
- (b) Fixed cost.
- (c) Variable cost.
- (d) Margin of safety.