

Decision Making – Incremental Revenue and Differential Cost Approach

1. A Company has a capacity of producing 1,00,000 units of a certain product in a month. The Sales Department reports that the following schedule of sales prices is possible.

Volume of Production	60%	70 %	80%	90%	100%
Selling price per unit Re	0.90	0.80	0.75	0.69	0.63

The variable cost of manufacture between these levels is Re. 0.15 per unit.
Fixed cost ` 40,000.

- (a) Prepare a statement showing incremental revenue and differential cost at each stage. At which volume of production will the profit be maximum?
 - (b) If there is a bulk offer at Re. 0.50 per unit for the balance capacity over the maximum profit volume for export and price quoted will not affect the internal sale, will you advise accepting this bid and why?
 - (c) What should be the minimum price for an offer of 20,000 units and capacity can not be increased.
2. The News Paper Group is to commence publication of a weekly leaflet called SENSATION. They have ascertained that printing costs will be as follows:

Number of copies	5,000	6,000	7,000	8,000	9,000
Cost (`)	1,250	1,440	1,662	1,840	1,900

Additional costs will be 10 p delivery cost for each copy ordered and a 15% commission payable on each copy sold. Any unsold copies are considered worthless.
The management has as yet not decided on a selling price for the leaflet and has ascertained that demand will be as follows at the following prices :

Price (p)	55	60	65	70	75
Demand	9,000	8,000	7,000	6,000	5,000

- (a) Calculate the number of copies that the management should order and the selling price that it should set.
 - (b) Assuming that 9,000 copies had been ordered and the selling price set as 65 p, advise the management whether to accept an up country order at 25 p a copy for 2,000 copies. (Local Demand is expected to fall by 10% as a result of accepting the offer.)
3. A company manufactures two products 'AB' and 'CD' by utilising 25% and 40% of its total capacity respectively. The cost data per unit for 2007– 08 are as under :

	'AB'	'CD'
Production & sales (units)	5,000	10,000
Selling price	` 80	` 100
Direct material	10	30
Direct labour (` 5 per hour)	25	20

Variable overheads are 100% on wages. Fixed overheads for 2007–08 amounted to Rs. 2,25,000.

During 2008-09 the company expects that the direct material costs will rise by 5%, the labour hourly rate will rise by 25 paise and variable overheads will continue to maintain same relationship with wages as was in 2007– 08. For the same volume of output as was in 2007– 08, the selling price is to be enhanced by 5% in case of 'AB' and 4% in case of 'CD'.

The company has the following proposals for consideration of the management for 2008-09 to improve profitability :

- (a) Utilise the balance capacity to produce 'AB' and to sell this increased production at the existing selling price of ` 80.
- (b) Utilise the balance capacity to produce 'CD'. While doing so the efficiency will down by 16% on account of newly recruited labour in respect of this increased production. Fixed selling and distribution expenses of ` 50,000 will have to be spent to sell this additional output.
- (c) Introduce new product 'EF' to utilise the balance capacity. One unit of 'EF' can be manufactured in 7 labour hours. Direct material will cost ` 40 per unit. Its selling price per unit will be ` 145. variable overheads will maintain same ratio to wages as for other two products. To boost the sales of 'EF' special advertising expenses of ` 30,000 will be spent.

The present allocation of 25% and 40% capacity for 'AB' and 'CD' cannot be changed and only the spare capacity is required to be used for production under the aforesaid proposals :

Required :

- (i) Present a statement of Profit for 2007– 08 .
- (ii) Using incremental revenue and differential cost approach, find out which proposal is more profitable for 2008-09.
- (iii) Present a statement of profit for 2008-09 based on above recommendation.

4. ZED Ltd. operates two shops. Product A is manufactured in Shop – 1 and customers' jobs against specific orders are being carried out in shop – 2 . Its annual statement of income is :

	Shop – 1 (Product-A)	Shop – 2 (Job Works)	Total
Sales/Income	<u>1,25,000</u>	<u>2,50,000</u>	<u>3,75,000</u>
Material	40,000	50,000	90,000
Wages	45,000	1,00,000	1,45,000
Depreciation	18,000	31,500	49,500
Power	2,000	3,500	5,500
Rent	5,000	30,000	35,000
Heat and Light	500	3,000	3,500
Other Expenses	<u>4,500</u>	<u>2,000</u>	<u>6,500</u>
Total Costs	<u>1,15,000</u>	<u>2,20,000</u>	<u>3,35,000</u>
Net Income	10,000	30,000	40,000

The depreciation charges are for machines used in the shops. The rent and heat and light are apportioned between the shops on the basis of floor area occupied. All other costs are current expenses identified with the output in a particular shop.

A valued customer has given a job to manufacture 5,000 units of X for shop – 2. As the company is already working at its full capacity, it will have to reduce the output of product – A by 50% to accept the said job. The customer is willing to pay ` 25 per unit of X. The material and labour will cost ` 10 and ` 18 respectively per unit. Power will be consumed on the job just equal to the power saved on account of reduction of output of A. In addition the company will have to incur additional overheads of ` 10,000.

You are required to compute the following in respect of this job:

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|---------------------------|----------------|
| (a) Differential cost; | (b) Full cost; |
| (c) Opportunity cost; and | (d) Sunk cost. |

Advise whether the company should accept the job.