

CHAPTER-14

MARGINAL COSTING

Ans.1. Sales = Cost + Profit
 Sales = 1,50,000 x 14 + 3,00,000 + Profit
 Sales = 21,00,000 + 3,00,000 + Profit
 Sales = 24,00,000 + 15% of cost
 Sales = 27,60,000
 27,60,000
 Selling Price = 1 50,000 = 18.4

(a) BEP = $\frac{\text{Fixed Cost}}{\text{Contributions p.u.}}$ = $\frac{3,00,000}{18.4 - 14}$ = 68,182 Unit

(b) Present Value Ratio = $\frac{4.4}{18.4} \times 100$ = 23.91%

(c) New Selling Price = 18.4 – 5% = 17.48

BEP = $\frac{3,00,000}{17.84 - \text{Variable Cost}}$ = 86,207 Units

Present Value Ratio = $\frac{3.48}{17.48} \times 100$ = 19.9%

(d) Profit = 3,96,000
 Fixed Cost = 3,00,000
 Contribution = 6,96,000
 Contribution p.u. = 3.48
 (17.48 – 14)

2,00,000 Unit

X Selling Price = 17.48
 = 34,96,000

Ans.2. (a) AR = $\frac{1,60,000}{800}$ = Rs.200

Absorbed amount = 220 x 200
 = 44,000

(b) Actual overheads = 1,60,000 4 = 40,000

(-) Absorbed overheads = 44,000

Over absorption 4,000

	Total	Per Unit
Valuable Production Cost	1,76,000	800
+ Fixed fact overheads	<u>44,000</u>	<u>200</u>
Cost of production	2,20,000	1,000
(-) Closing stock of FG (60)	<u>(60,000)</u>	<u>1,000</u>
COGS	<u>1,60,000</u>	<u>1,000</u>

Ans.4.

	A	B	C
SP	100	75	50
(-) Variable Cost p.u.			
Direct Material	45	30	15
Others	45	30	15
Contribution p.u.	<u>10</u>	<u>15</u>	<u>20</u>
Raw Material p.u.	45	30	15
Contribution / Rupee of Raw Material	<u>0.22</u>	<u>0.5</u>	<u>1.33</u>
Ranks	III	II	I

Products	Ranks	Raw Material	Raw Material Cost / amt.	No. of Units	Contribution / Unit	Total
A	III	9,00,000	45	20,600	10	2,00,000
B	II	7,50,000	30	20,000	15	3,75,000
C	I	1,50,000	15	10,000	20	2,00,000
		<u>18,00,000</u>			Contribution	<u>77,000</u>
					(-) Fixed Cost	<u>6,80,000</u>
					Profit	<u>98,000</u>

Ans.5. Sales	1,00,000
x M/s Ratio	40%
M/s	<u>40,000</u>
x Present Value Ratio	50%
Profit	<u>20,000</u>

Ans.6. (i) Present Value Ratio = $\frac{\text{Fixed Cost}}{\text{BES}} \times 100 = \frac{40,000}{1,60,000} \times 100 = 25\%$

Sales	2,00,000
(-) BES	<u>1,60,000</u>
M/s	40,000
x Present Value Ratio	25%
Profit	<u>10,000</u>

$$(ii) \text{ Present Value Ratio} = \frac{\text{Fixed Cost}}{\text{BES}} = \frac{20,000}{40,000} \times 100$$

$$= 50\%$$

$$\text{Sales} = \frac{\text{Contribution}}{\text{Present Value Ratio}} = \frac{20,000 + 10,000}{50\%}$$

$$= 60,000$$

Ans.7.

$$\text{BEP in Units} = \frac{\text{Fixed Cost}}{\text{Contribution / Unit}} = \frac{10,000}{\left(\frac{3 \times 2 + 8 \times 3}{11} \right)}$$

$$= 3,667 \text{ Units}$$

Ans.8.

$$\text{BES} = \frac{\text{Fixed Cost}}{\text{Present Value Ratio}} = \frac{20,000}{\left(\frac{2 \times 30 + 3 \times 40}{5} \right)}$$

$$= \frac{20,000}{36\%} = ₹ 55,556$$

Ans. 9.

	A	B
SP	10	20
(-) p.u.	4	15
Contribution p.u.	<u>6</u>	<u>5</u>
x no. of units	10,000	20,000
Contribution	<u>60,000</u>	<u>1,00,000</u>

Total Contribution	1,60,000
Fixed Cost	80,000
Profit	<u>80,000</u>

$$\text{BEP in Units} = \frac{\text{Fixed Cost}}{\text{Contribution / Unit}} = \frac{80,000}{(16,000 / 3)}$$

$$= 15,000 \text{ units}$$

$$\text{BES} = \frac{\text{Fixed Cost}}{\text{Present Value Ratio}} = \frac{80,000}{\left(\frac{1,60,000}{5,00,000} \right) \times 100}$$

$$= \frac{80,000}{32\%} = ₹ 2,50,000$$

Ans.10.(a) BEP = $\frac{\text{Fixed Cost}}{\text{Contribution p.u.}}$

Machine A = $\frac{30,000}{6}$ = 5,000 units

Machine B = $\frac{16,000}{4}$ = 4,000 units

(b) Let no. of units be x

Profit = Contribution – Fixed Cost

$$6x - 30,000 = 4x - 16,000$$

$$x = 7,000$$

(c) Above 7,000 units – Machine A is better as it has lower Variable Cost p.u.

Below 7,000 units – Machine B is better as it has lower Fixed Cost. At 7,000, Machines are indifferent.

