Contribution method:

Break even point= Fixed exp/CM per unit

 In units = 240000/15

 =16000 units

Break even point in sales= Fixed exp/CM ratio

 = 240000/.25

 = 960000 tk

Equation

Sales= Variable exp+ Fixed exp+ Profit

60Q= 45 Q+ 240000+0

60Q-45Q=240000

15Q=240000

Q= 240000/15

 = 16000 units

Break even point in sales 16000\*60=960000 tk

3. Sales increase 400000

 CM 25%

Cm increase 1000000

- Fixed expense increase 10000

Net income will increase 90000

6-13

 Case 1. No of Unit Sold 9000

 Sales 270000

 \_ VE 162000

 CM ?12/ 108000

 \_ FE 90000

 NI 18000

Case 2 : VE 140000

 No of Unit Sold ?14000

 Per unit

 Sales 350000

 \_ VE ? 140000

 CM ? 210000 15

 \_ FE 170000

 NI 40000

VE+CM = Sales

VE= Sales- CM

VE= 350000-210000=140000

B)

 1. Sales 450000 100%

 \_ VE ?270000 60%

 CM 180000 40% 40%

 \_ FE ?

 NI 65000

CM=FE+ NI

FE= CM- NI=180000-65000=115000

VE ratio= VE/Sales\*100=

CM ratio= CM/Sales\*=70000/200000\*100=35%

Workings: Table :2 :Case 3:

CM 560000

-FE 470000

NI 90000

80% =560000

1%= 560000/80

So 100%= 560000/80\*100=700000 Tk

6-10

1. Break even point in unit= 150000/12=12500 units

 BE point in sales =150000/CM/Sales=150000/12/40= 150000/.3= 500000Tk

1. Break even unit 12500 units

 CM per unit 12 Tk

 CM at break even point 12500\* 12=150000Tk

1. FE+TP/CM per unit= 150000+18000/12=14000

I/S

Sales 14000\*40=560000

-VE 14000\*28=392000

CM 168000

-FE 150000

NI 18000

1. Margin of safety= Actual sales- Break even sales=600000-500000=100000Tk

 Margin of safety in %=Margin of safety/Sales= 100000/600000\*100=16.67%

1. Sales increase 80000 tk

 CM ratio 30% (12/40)\*100=30%

 VE ratio 70%

 Net operating income will increase 80000\*30%=24000 Tk

Req 3:b

I/S

Sales 14000\*40=560000

\_VE 14000\* 28=392000

CM 168000

\_ FE 150000

NI 18000

6-13:

**Req:3**

**Sales ?400000**

**-Variable exp 280000**

**CM 120000(20000\*6)**

**\_ FE ? 85000**

**NI 35000**

**Req:4**

**Sales 160000**

**-VE 90000**

**CM 70000**

**\_ FE 82000**

 **NI (12000)**

**Incremental approach:**

**Sales increase 100000 Tk**

**There is no change in cost behaviour pattern**

**What will be the increase in net operating income?**

**Sales Increase 100000 Tk**

**CM ratio 30%**

**So net operating income will increase by 100000\*30%=30000 Tk**