**Problem 6-19**

1.CM Ratio= 6/20\*100=30% or 81000/270000\*100=30%

Break even point in units= Fixed Exp/CM per unit

 =90000/6=15000 units

Break even point in sales=FE/CM ratio

 =90000/.3=300000Tk

2. Sales increase 70000 Tk

CM ratio 30%

So CM will increase when sales increase

70000 tk70000\*30%= 21000

\_ Increase in Advertising Exp 8000

Increase in Net operating income 13000

Now the amount of net operating income will be 13000-9000=4000 Tk

3. I/S

Sales 27000\*18= 486000

-VE 27000\*14= 378000

CM 108000

-FE (90000+35000) 125000

NI (17000)

4. Target unit=FE+ Target profit/CM per unit

 =90000+4500/5.4=17500 units

 Workings

SP 20

 VE 14.6

 CM 5.4

5. a) CM ratio=13/20=65%

Workings

20

7

13

Break even point in units= 90000+118000/13=16000 units

Break even point in sales 90000+118000/.65=320000 TK

b) Not Automated Automated

 I/S I/S

Sales 20000\*20 =400000 20000\*20 =400000

\_VE 20000\*14=280000 20000\*7=140000

CM 120000 260000

-FE 90000 90000+118000= 208000

N/I 30000 52000

So the company should automate its operations

 **Problem 6-17**

Req 1

 A 100 B900 Total

Sales 700000 300000 1000000

-VE 280000 90000 370000

CM 420000 210000 630000

-FE 598500

N/I 31500

Req 2

Breakeven point for the company in sales= 598500/.63=950000 Tk

Break even point for sales mix

Sales of two product 700000:300000

Ratio for the two product 70:30 or 7:3

Total of these two ratio 100 or 10

A100= 950000\*70/100=665000 Tk

B900= 950000\*30/100=285000 Tk

Req 3

 Sales increase 50000 Tk

CM ratio 63%

CM/Net operating income will increase by 50000\*63%=31500 Tk

As there is no change in fixed or variable expense so as we have CM ratio

63% so if sales increase 50000 tk then NI will increase by 31500 Tk

Problem :6-11

Req 2:

BEP in units= FE/CM per unit

CM per unit= FE/BEP in units

CM per unit =8000/250

 =32 Tk

Sales

-VE

CM

Total Variable exp 7+3=10

Sales= VE +CM

Selling price per ticket will be= VE per unit+ CM per unit

 = 10+32

 =42 Tk