Q.1 A Select correct option & re-write the sentence. (Any 8)

1 ABC Ltd. manufactures a single product which it sells for Rs. 50 per unit.
Fixed costs are Rs. 80,000 per annum. The contribution to sales ratio is 50%. ABC Ltd's breakeven point in units is:

a) 3,500	b) 3,000
c) 3,200	d) 3,400

2 A company plans to produce & sell 5,000 units of product C each month, at the selling price of Rs. 20 per unit.
The unit cost comprised of Rs. 8 variable cost & Rs. 6 fixed cost. Calculate the margin of safety as a percentage of planned sales:

a) 60%	**b) 50%**
c) 65%	d) 75%

3 A budget that gives a summary of all the functional budgets is known as:

a) Capital Budget	b) Flexible Budget
c) Master Budget	d) Discretionary Budget

4 The fixed variable cost classification has a special significance in the preparation of:

a) Capital Budget	**b) Flexible Budget**
c) Master Budget	d) Cash Budget

5 When preparing a production budget, the quantity to be produced equals:

a) Sales quantity + opening stock + closing stock
b) Sales quantity - opening stock + closing stock
c) Sales quantity - opening stock - closing stock
d) Sales quantity + opening stock - closing stock

6 A job requires 12,000 actual labour hours for completion & it is anticipated that there will be 20% idle time.
If the wage rate is Rs. 10 per hour, what is the idle cost for the job?

a) Rs. 19,200	b) Rs. 24,000
c) Rs. 28,800	**d) Rs. 30,000**

7 Of the four costs shown below which would not be included in the cash budget?

- **a) Depreciation of the fixed asset**
- b) Office salaries
- c) Commission paid to the agents
- d) Capital cost of a new computer

8 PG Ltd. makes a single product & is preparing its material usage budget for next year. Each units of product requires 2kgs. of material, & 5,000 units of product are to be produced next year. Opening stock of material is budgeted to be 800 kgs. & PG Ltd. budget to increase material stock at the end of next year by 20%. The material usage budget for next year is:

- a) 8,000 kg
- b) 9,840 kg
- c) 10,000 kg
- **d) 10,160 kg**

9 If a company uses only one type of material, then following variance cannot be found

- a) Material cost variance
- b) Material price variance
- c) Material usage variance
- **d) Material yield variance**

10 Telephone charges is

- a) Variable cost
- b) fixed cost
- **c) semi variable cost**
- d) none of the above

B	**State whether following statements are true or false (Any 7)**	**Ans.**
1	Equal emphasis should be laid on favourable & unfavourable variances.	**TRUE**
2	Material yield variance is the difference between the standard yield specified & the actual yield obtained.	**TRUE**
3	Analysis of variances is done in order to determined the reasons for increase or decrease in profit.	**TRUE**
4	A system of budgetary control can not be used in an organization when standard costing is being used.	**FALSE**
5	Budgets are always prepared for past.	**FALSE**
6	Forecast & budget are one & the same.	**FALSE**
7	The relationship between contribution & turnover is represented in the form of profit volume ratio.	**TRUE**
8	At break-even point, fixed cost plus profit is equal to total sales.	**FALSE**
9	Margin of safety = Break-even sales + Fixed cost.	**FALSE**
10	A high margin of safety usually indicates high fixed overheads.	**FALSE**

A.2

Particulars	**Existing**	**20% Decrease in F. C. (Rs.)**	**10% increase in F. C. (Rs.)**	**10% Decrease in V C (Rs.)**	**10% increase in S. P (Rs.)**
Sales	20,000	20,000	20,000	20,000	22,000
Less: Variable Cost	10,000	10,000	10,000	9,000	10,000
contribution	10,000	10,000	10,000	11,000	12,000
Less: Fixed Cost	6,000	4,800	6,600	6,000	6,000
Profit	**4,000**	**5,200**	**3,400**	**5,000**	**6,000**
P/v Ratio = cont/Sales*100	**50%**	**50%**	**50%**	**55%**	**55%**
Break Even Point = FC/PV*100	**12,000**	**9,600**	**13,200**	**10,909**	**11,000**
Margin of Safety = Sales - BEP	**8,000**	**10,400**	**6,800**	**9,091**	**11,000**

10% increase in VC & SP (Rs.)
22,000
11,000
11,000
6,000
5,000
50%
12,000
10,000

A.2

	Statement Showing Contribution per Direct labour Hour			
	particulars	**X ₹**	**Y ₹**	**Z ₹**
a.	Selling Price per unit	60	55	50
b.	Variable Cost per unit:			
	Direct Materials Cost	20	12	16
	Direct Labour Cost	8	6	8
	Variable Overheads	7	13	8
	Total (b)	**35**	**31**	**32**
c.	Contribution per unit (a-b)	25	24	18
d.	Direct Material Per Unit (in kgs)	5	3	4
e.	Contribution per kg of Direct Material (C/d)	5	8	4.5
f	**Ranking**	**II**	**I**	**III**

a. The maximum direct Material is 36,000 kg and would be utilised in the following order to yield maximum profit:

Product	Product-mix	Raw Material P.U.	Total Material (Kgs)
Y (Maximum Demand)	5,000	3	15,000
X (Maximum Demnad)	4,000	4	16,000
Z (working note)	1,000	5	5,000
Total Kgs			**36,000**

Calculation of Profit

Product	No. of units	Contributi on per unit	Total
X	4,000	25	100,000
Y	5,000	24	120,000
Z	1,000	18	18,000
Total Contribution			238,000
Less: Fixed Overheads (WN 2)			(60,000)
Profit			**178,000**

Working Note:

1 **Production units of Product Z**

Balance Kgs for Production of Z = 36,000 - 15,000 (Y) - 16,000 (X)

= 5,000

Therefor Prodcution of X = $\frac{\text{Balance Kgs}}{\text{Kgs required per unit}}$

= 5000/5 =1,000 units

2 **Fixed Overhead are given in the Question as Per unit Rs.10 so we need to calculate Budgeted Fixed OH based on Budgeted Units and not based on Actual Units Produced**

Product	No. of units Budgeted	Cost per unit	Total
X	1,800	10	18,000
Y	3,000	10	30,000
Z	1,200	10	12,000
Total Fixed Cost			**60,000**

A.3

% Capacity Utilisation	P.U.	50%	P.U.	60%	P.U.	80%
Budgeted Production		10,000		12,000		16,000
Sales	**20**	**200,000**	**20**	**235,200**	**21**	**336,000**
Variable Cost						
Material	10	100,000	10.20	122,400	10.5	168,000
Wages	3	30,000	3.00	36,000	3.0	48,000
Factory Overheads	1.8	18,000	1.80	21,600	1.8	28,800
Admin overheads	1	10,000	1.00	12,000	1.0	16,000
	15.8	**158,000**	**16**	**192,000**	**16.3**	**260,800**
Fixed Cost						
Factory Overheads		12,000		12,000		12,000
Admin Overheads		10,000		10,000		10,000
Total		**22,000**		**22,000**		**22,000**
Profit		**20,000**		**21,200**		**53,200**

A.3

Sales Budget (in units)						W. N.
Particulars	**Jan**	**Feb**	**Mar**	**Total**		**Apr**
Sales Quantities	10,800	15,600	12,200	38,600		**10,400**

Pruduction Budget (in Units)						
Particulars	**Jan**	**Feb**	**March**	**Total**		**Apr**
Sales Qunatities	10,800	15,600	12,200	38,600		10,400
(+) Closing Stock	3,900	3,050	2,600	2,600		2,450
(-) Opening stock	(2,700)	(3,900)	(3,050)	(2,700)		(2,600)
Production Quantities	**12,000**	**14,750**	**11,750**	**38,500**		**10,250**

Materials Consumption Budget (Material A)						
Particulars	**Jan**	**Feb**	**March**	**Total**		**Apr**
Production Quantities	12,000	14,750	11,750	38,500		10,250
Raw Mat A (kg Per unit)	4	4	4			4
Consumption (kgs)	48,000	59,000	47,000	154,000		41,000
(+) Closing Stock	29,500	23,500	20,500	20,500		50%
(-) Opening stock	(24,000)	(29,500)	(23,500)	(24,000)		**20,500**
Raw Mat A Purchase (kg)	**53,500**	**53,000**	**44,000**	**150,500**		
Cost per Kg	3	3	3			
Raw Mat A Purchase (Rs)	**160,500**	**159,000**	**132,000**	**451,500**		

Materials Consumption Budget (Material B)						
Particulars	**Jan**	**Feb**	**March**	**Total**		**Apr**
Production Quantities	12,000	14,750	11,750	38,500		10,250
Raw Mat A (kg Per unit)	5	5	5			5
Consumption (kgs)	60,000	73,750	58,750	192,500		51,250
(+) Closing Stock	36,875	29,375	25,625	25,625		50%
(-) Opening stock	(30,000)	(36,875)	(29,375)	(30,000)		**25,625**
Raw Mat B Purchase (kg)	**66,875**	**66,250**	**55,000**	**188,125**		
Cost per Kg	2	2	2			
Raw Mat A Purchase (Rs)	**133,750**	**132,500**	**110,000**	**376,250**		

A.4 **Calculation of Labour Variance**

Given std		Standard Cost for		90		Actual Cost for		90
108		**SH**	**SR**	**Amt**	**RH**	**AH**	**AR**	**Amt**
2,880	SK	2,400	20	48,000	2,640	1,760	25	44,000
1,920	SS	1,600	10	16,000	1,760	2,640	5	13,200
4800		**4,000**		**64,000**	**4,400**	**4,400**		**57,200**

Labour Cost Variance (LCV) = SH * SR - AH * AR

SK	=	**48,000**	-	**44,000**	**4,000**	**F**
SS	=	**16,000**	-	**13,200**	**2,800**	**F**
					6,800	**F**

Labour Rate Variance (LRV) = (SR - AR) * AH

SK	=	**(20 - 25) ***	**1,760**	=	**(8,800)**	**A**
SS	=	**(10 - 5) ***	**2,640**	=	**13,200**	**F**
					4,400	**F**

Labour Efficiecncy Variance (LEV) = (SH - AH) * SR

SK	=	**(2400 - 1760)***	**20**	=	**12,800**	**F**
SS	=	**(1600 - 2640)***	**10**	=	**(10,400)**	**A**
					2,400	**F**

Labour Yield Variance (LYV) = (SH - RH) * SR

SK	=	**(2400 - 2640)***	**20**	=	**(4,800)**	**A**
SS	=	**(1600 - 1760)***	**10**	=	**(1,600)**	**A**
					(6,400)	**A**

Labour Mix Variance (LMV) = (RH - AH) * SR

SK	=	**(2640-1760)***	**20**	=	**17,600**	**F**
SS	=	**(1760-2640)***	**10**	=	**(8,800)**	**A**
					8,800	**A**

Check 1 **LCV = LRV + LEV = 6,800 A**

Check 2	**LEV = LYV + LMV**	**=**	**2,400**	**F**

A.4 OR	Calculation of Sales Variance							
Given std		Budeget		1		Actual		1
		BQ	SP	Amt	RQ	AH	AP	Amt
1,000	A	1,000	5	5,000	1,111	1,200	6	7,200
750	B	750	10	7,500	833	700	9	6,300
500	C	500	15	7,500	556	600	14	8,400
2250		2,250		20,000	2,500	2,500		21,900

Sales Value Variance (SVV) = BQ * SP - AQ * AP

A	=	5,000	-	7,200	(2,200)	F
B	=	7,500	-	6,300	1,200	A
C	=	7,500	-	8,400	(900)	A
					(1,900)	F

Sales Price Variance (SPV) = (SP - AP) * AQ

A	=	(5 - 6) *	1,200	=	(1,200)	F
B	=	(10 - 9) *	700	=	700	A
C	=	(15 - 14) *	600	=	600	A
					100	A

Sales Volume Variance (SVV) = (BQ - AQ) * SP

A	=	1000 - 1200)	5	=	(1,000)	F
B	=	(750 - 700)*	10	=	500	F
C	=	(500 - 600)*	15	=	(1,500)	A
					(2,000)	F

Sales Quantity Variance (LYV) = (BQ - RQ) * SP

A	=	1000 - 1111)	5	=	(556)	F
B	=	(750 - 833)*	10	=	(833)	F
C	=	(500 - 556)*	15	=	(833)	F
					(2,222)	F

Sales Mix Variance (MMV) = (RQ - AQ) * SP						
A	=	1111 - 1200)	5	=	(444)	F
B	=	(833 - 700)*	10	=	1,333	A
C	=	(556 - 600)*	15	=	(667)	A
					222	F

Check 1	SVV = SPV + S vol. V	(1,900)	F
Check 2	S Vol. V = SQV + SMV	(2,000)	F