OD-134

October-2019

M.com., Sem.-III

504-EA/EE: Management Accounting – I (New and Old)

Time: 2:30 Hours] [Max, Marks: 70

Q1:- (A) (i) The following figures are available with reference four week period

Of working in ABC Ltd. With budgeted production of 5,000 units.

Other information is as under:

₹

Production and sales(5,000 units @ ₹ 50 per unit. 2,50,000

Variable cost (at ₹ 35 per unit) 1,75,000

Profit 40,000

On account of an external power line failure resulting from damage

Due to storm, production for 5 days out of 20 days was lost and

Actual results were as follows:

Production and sales – 3,900 units @ ₹ 50 per unit

Variable cost - ₹ 35 per unit)

Profit - ₹ 35,000

Calculate and explain:

- (1) Traditional Variances and
- (2) Planning and Operational Variances

<u>Answer</u>

Original Budget	Revised Budget		Actual Result
	Days	Units	
5000 units	20	5000	3900 Units
	15	(?)	
	(20-5) =	3750 units	

Original I	Original Budget		Revised Budget		Budget
Sales (50)	2,50,000	Sales (50)	1,87,500	Sales (50)	1,95,000
- Variable Cost (35)	1,75,000	- Variable Cost (35)	1,31,250	- Variable Cost (35)	1,36,500
Contribution	75,000	Contribution	56,250	Contribution	58,500
- Fixed Cost	35,000	- Fixed Cost	35,000	- Fixed Cost	23,500
Profit	40,000	Profit	21,250	Profit	35,000

(A) Traditional Variances

(i) Sales Margin Variances :-

(B) Planning and operating variances

(i) Planning Variances :-

(ii) Operating Variances :-

(ii) Calculate and explain operating variances from the following

Information:

Standard material cost: 7 kg per unit at ₹ 50 per kg

Actual production: 1,000 units

Actual usage of material: 8,000 kg at cost of ₹ 4,16,000

A change in export import policy of government has made it

Possible to purchase the above material at ₹ 47 per kg. What

Would be the situation, if traditional variance analysis is applicable?

<u>Answer</u>

70 1 75	Original Budget		Revised Budget	
Units 1	Kg 7	Units 1	Kg 7	
1000	?	1000	?	
7,000 Kg	× 50 ₹	7,000 Kg) × 47 ₹	8,000 Kg × 52 ₹
₹ 3,50,	000/-	₹ 3,29,	,000/-	₹ 4,16,000/-
	anning varia	nce opera	ting variance	

Traditional Variance (Price + Usage)

(A) Traditional Variance

- (i) Material Cost Variances :-
 - = Original Budget Cost Actual Cost
 - = 3,50,000 4,16,000
 - = -66,000 (U)
- (ii) Material Price Variances :-
 - = Actual Qty (Std. Price Actual Price)
 - = 8,000 (52-52)
 - = 8,000 (-2)
 - = -16,000 (U)
- (iii) Material Usage Variances :-
 - = Std. Price (Std. Qty Actual Qty)
 - = 50 (7,000 8,000)
 - = 50 (-1,000)
 - = -50,000 (U)

(B) As per the Opportunity Cost Approach

- (I) Planning Variances
 - = Original Budget Cost Revised Budget Cost
 - = 3,50,000 3,29,000
 - = + 21,000 (F)
- (II) Operating Variances
- (i) Material cost variances
 - = Revised Budget Cost Actual Cost
 - = 3,29,000 4,16,000
 - = -87,000 (U)
- (ii) Material Price Variances :-
 - = Actual Qty (Std. Price Actual Price)
 - = 8,000 (47-52)
 - = 8,000 (-5)
 - = -40,000 (U)
- (iii) Material Usage Variances :-
 - = Std. Price (Std. Qty Actual Qty)
 - =47(7,000-8,000)
 - = 47 (-1,000)
 - = -47,000 (U)

(B) Choose the correct option: (any four)

- (1) Which of the following method is not of management accounting?
 - (a) Service costing
- (b) Budgetary control
- (c) Marginal Costing
- (d) Historical Costing
- (2) Which of the following is not a limitation of management accounting?
 - (a) Decisions of management
- (b) Less expensive
- (c) Figures in money only (d) Depends upon financial accounting
- (3) As per opportunity cost approach, planning variance is
 - (a) Original standards Revised standards
 - (b) Revised standards Actual Results

- (c) Actual results Revised Standards
- (d) Original standards Actual Results
- (4) As per opportunity cost approach, operating variance is
 - (a) Revised standards Original standards
 - (b) Actual Results Revised standards
 - (c) Revised Standards Actual results
- (5) accounting needs to be dynamic and forward looking.
 - (a) Management
- (b) Financial

(c) Cost

- (d) None of these
- (6) As per opportunity cost approach, wage rate variance =
 - (a) Actual hours (Standard rate Actual rate)
 - (b) Actual hours (Revised rate Actual rate)
 - (c) Standard hours (Actual rate Standard rate)
 - (d) All of the above
- Q2 :- (A) (i) A department of H ltd. Attains sales of ₹ 30,00,000 at 80% Capacity and other information are given below :

	<u> </u>
Administration cost :	₹
Rate and taxes (fixed)	40,000
Office salaries (fixed)	2,40,000
General expenses	5% of sales
Selling cost:	
Salaries	10% of sales
Sales office expenses	3% of sales
Travelling expenses	4% of sales
Distribution cost :	
Rent	2.5% of sales
Wages (Fixed)	55,000
Other expenses	6% of sales

Draw – up flexible administration, selling and distribution cost budget at 90% and 100% capacity.

<u>Answer</u>

Overhead Cost Budget

Particulars	80%	90%	100%
Sales (₹)	30,00,000	33,75,000	37,50,000
Administration Cost :-			
Rate and Taxes (fixed)	40,000	40,000	40,000
Office salaries (fixed)	2,40,000	2,40,000	2,40,000
General Exp. (5% of sales)	1,50,000 (30,00,000×5%)	1,68,750 (33,75,000×5%)	1,87,500 (37,50,000×5%)
Total (A)	4,30,000	4,48,750	4,67,500
Selling cost :-			
Salaries	3,00,000	3,37,500	3,75,000
Sales office expenses	90,000	1,01,250	1,12,500
Travelling Expenses	1,20,000	1,35,000	1,50,000
Total (B)	5,10,000	5,73,750	6,37,500
Distribution cost :-			
Rent	75,000	84,375	93,750
Wages (fixed)	55,000	55,000	55,000
Other expenses	1,80,000	2,02,500	2,25,000
Total (C)	3,10,000	3,41,875	3,73,750
Total cost (A+B+C)	12,50,000	13,64,375	14,78,750

(ii) Vikram Ltd. Uses four types of raw material P, Q, R and S for Manufacturing three products A, B and C. Production is carried on in four Departments. The following information is given.

Material	Material cost per unit	Pro	oduct Ur	nits
	(₹)	Α	В	С
Р	15	-	1	2
Q	18	1	1	-
R	10	1	-	2
S	5	1	-<	1

Budgeted Data:		A	В	С
 Sales during year (₹) 		30,00,000	28,00,000	48,00,000
Selling price per unit (₹)		60	70	80
2. Finished goods stock				
(units) At the year end		20,000	21,000	28,000
In the beginning of year		6,000	4,000	8,000
	P	Q	R	s
3. Raw material stock				
(units) At the year end	40,000	24,000	24,000	34,000
In the beginning of year	37,000	25,000	28,000	38,000

Prepare for the year 2018:

- (1) Production Budget
- (2) Production cost budget for direct material of various departments for year.
- (3) Purchase Budget.

<u>Answer</u>

(i) Production Budget

Particulars	Α	В	С
Sales (₹)	30,00,000	28,00,000	48,00,000
Sales Price (₹)	60	70	80
Sales Units= $\frac{Sales}{Sales \ Price \ Per \ Unit}$	30,00,000	28,00,000 70	48,00,000 80
Sales units	50,000	40,000	60,000
+ Closing stock	20,000	21,000	28,000
	70,000	61,000	88,000
- Opening stock	6,000	4,000	8,000
Production Units	64,000	57,000	80,000

(ii) Production cost budget for direct material of various departments :-

Particulars	Raw Material			
	P	Q	R	S
Raw Material consumed (Pro. Unit ×Per unit cons.)				
Product A	-	(64000×1) 64,000	(64000×1) 64,000	(64000×1) 64,000
Product B	(57000×1) 57,000	(57,000×1) 57000	-	-
Product C	(80,000×2) 1,60,000	E	(80000×2) 1,60,000	(80000×1) 80,000
Total material consumed	2,17,000	1,21,000	2,24,000	1,44,000
× Cost per unit	15	18	10	5
Material cost	32,55,000	21,78,000	22,40,000	7,20,000

Raw Material Purchase Budget

Raw Material

Particulars	Р	Q	R	S
Raw material Consumed	2,17,000	1,21,000	2,24,000	1,44,000
+ Closing stock Of raw material	40,000	24,000	24,000	34,000
	2,57,000	1,45,000	2,48,000	1,78,000

- Opening stock Of raw material	37,000	25,000	28,000	38,000
Raw Material Purchase	2,20,000	1,20,000	2,20,000	1,40,000
× Price Per unit	15	18	10	5
Raw Material Purchase ₹	33,00,000	21,60,000	22,00,000	7,00,000

Total Purchase =
$$(33,00,000 + 21,60,000 + 22,00,000 + 7,00,000)$$

= $83,60,000$

(B) Choose the correct option: (any four)

(4)

- (1) Which of the following describes the format for material purchase budget
 - (a) Sales + desired production Opening inventory
 - (b) Required production + desired closing inventory opening inventory
 - (c) Opening inventory + desired production desired closing inventory
 - (d) Sales profit = cost
- (2) Which of the following is not a type of budget?
 - (a) Cash budget

(b) Flexible budget

(c) Both (a) & (b)

- (d) Cash account
- (3) Master budget is also known as
 - (a) Cash budget

(b) Finalized profit plan

(c) Summary budget

- (d) Both (b) & (c)
- (4) Research and development budget is the example of
 - (a) Short-term budget
- (b) Long-term budget

(c) Cash budget

- (d) Current budget
- (5) Which of the following item is not included while preparing a cash Budget ?
 - (a) Collection from debtors
- (b) Payment of creditors

(c) Depreciation

(d) None of these

- (6) Principal budget factor is also known as
 - (a) Profit and loss account

(b) Key factor

(c) Balance Sheet

(d) All of the above

Q3:- (A) Following information is obtained from the cost department of Khushi Ltd.

Standard Cost	Per unit (₹)
Material cost (3 kg @ ₹ 20per kg)	60
Direct wages (4 hours @ ₹ 5 per hour)	20
Variable overheads (4 hours @ ₹ 2.5 per hour)	10
Fixed overhead (4 hours @ ₹ 5 per hour)	20
Total cost	110
Profit	10
Selling Price	120

Budgeted Production and Sales – 25,000 Units.

Actual Data	₹
Material consumed : 62,000 kg @ ₹ 19 per kg	11,78,000
Wages: 82,000 hours @ ₹ 4.50 per hour	3,69,000
Variable overheads	2,20,000
Fixed overheads	4,15,000
Actual production and sales @ ₹ 125 per unit	25,00,000

You are required to calculate difference variances and reconcile the budgeted Profit with actual profit.

<u>Answer</u>

Step 1:- calculation of Budgeted Profit

Budgeted Profit = Budgeted Production \times Std. Profit per unit

 $= 25,000 \times 10$

= ₹ 2,50,000

Step 2:- Calculation of Actual Profit

Particulars	Amount	Amount
Sales (20,000 units × 125)		25,00,000
Less:-Material Consumed (62,000×19)	11,78,000	
Wages (82000 Hours × 4.50)	3,69,000	
Variable Overheads	2,20,000	
Fixed Overheads	4,15,000	21,82,000
Actual Profit		3,18,000

Step 3:- Calculation of variances

- (A) Material Variances
- → Std Qty for Actual Production

Units	Kg
1	3
20,000	?
	= 60,000 kg

→ Prepare a table

Standard		Actual			
Qty	Price	Amount	Qty	Price	Amount
60,000	20	12,00,000	62,000	19	11,78,000

→ Calculate Variances

- (i) Material Cost Variances
 - = Std. Cost Actual Cost
 - = 12,00,000 11,78,000
 - = + 22,000(F)
- (ii) Material Price Variance
 - = Actual Qty (Std. Price Actual Price)
 - = 62,000 (20 19)
 - = 62,000 (+1)
 - = + 62,000 (F)
- (iii) Material Usage Variance
 - = Std. Price (Std. Qty- Actual Qty)
 - = 20 (60,000 62,000)
 - = 20 (-2,000)
 - = -40,000 (U)

(B) Labour Variances

→ Std. Hours for Actual Production

Units	Hours
1	4
20,000	?
	= 80,000 Hours

→ Prepare a table

Standard	Actual

Hours	Rate	Amount	Hours	Rate	Amount
80,000	5	4,00,000	82,000	4.50	3,69,00

→ Labour Variances

- (i) Labour Cost Variances
 - = Std. Cost Actual Cost
 - = 4,00,000 3,69,000
 - = + 31,000(F)

(ii) Labour Rate Variance

- = Actual Hours (Std. Rate Actual Rate)
- = 82,000 (5 4.50)
- = 82,000 (0.50)
- = +41,000 (F)

(iii) Labour Efficiency Variance

- = Std. Rate (Std. Hours- Actual Hours)
- = 5 (80,000 82,000)
- = 5 (-2,000)
- = -10,000 (U)

(C) Variable Overhead Variance

→ Std. Hours for Actual Production

Units 1	Hours 4
20,000	?
Ans	= 80,000 Hours

→ Prepare a table

Standard	Actual

Hours	Rate	Amount	Hours	Rate	Amount
80,000	2.50	2,00,000	82,000	2.682	2,20,00

→ Variable Overhead Variances

- (i) Variable Overhead Cost Variances
 - = Std. Cost Actual Cost
 - = 2,00,000 2,20,000
 - = -20,000(U)
- (ii) Variable Overhead Expenditure Variance
 - = Actual Hours (Std. Rate Actual Rate)
 - = 82,000 (2.50 2.682)
 - $= (82,000 \times 2.50) (82,000 \times 2.682)$

$$= 2,05,000 - 2,20,000$$
 (Rounding Figures)

$$= -15,000 (U)$$

(iii) Variable overhead Efficiency Variance

$$= 2.50 (80,000 - 82,000)$$

$$= 2.50 (-2,000)$$

$$= -5,000 (U)$$

(D) Fixed Overhead Variances

Budgeted Production = 25,000 units

Actual production = 20,000 units

Std. Rate = 20 Rs. Per unit

Budgeted Fixed Overhead = $(25,000 \times 20) = 5,00,000$

Actual Fixed Overhead = 4,15,000

(i) Fixed overhead Total Cost Variances

$$= (20,000 \times 20) - 4,15,000$$

$$=4,00,000-4,15,000$$

$$= -15,000(U)$$

(ii) Fixed Overhead Budget Variance

$$= 5,00,000 - 4,15,000$$

$$= + 85,000 (F)$$

(iii) Fixed Overhead Volume Variance

$$= 20 (20,000 - 25,000)$$

$$= 20 (-5,000)$$

$$= -1,00,000 (U)$$

(E) Sales Profit Variances

- (i) Sales Price Variances
 - = Actual Sales Qty (Actual sales Price Budgeted Sales Price)
 - = 20,000 (125 120)
 - = 2,000 (5)
 - = + 1,00,000(F)
- (ii) Sales Margin Volume Variance
 - = Std. Profit per unit (Actual Qty Budgeted Qty)
 - = 10 (20,000 25,000)
 - = -50,000 (U)

Step 4:- Statement of Reconcile the Budgeted Profit With Actual Profit:-

Particulars	Amount	Amount
Budgeted Profit		2,50,000
Sales Price Variances	+ 4,00,000	
Sales Margin Volume Variance	- 50,000	
Material Price Variance	+ 62,000	
Material Usage Variance	- 40,000	
Labour Rate Variance	+ 41,000	
Labour Efficiency Variance	- 10,000	
Variable O/h Expenditure Variance	- 15,000	
Variable O/h Efficiency Variance	- 5000	
Fixed O/h Budget Variance	+ 85,000	
Fixed O/h Volume Variance	- 1,00,000	68,000
Actual Profit		3,18,000

(B) Choose the correct option (any three)

(3)

(1) Material usage variance is

(a)
$$(AQ \times AP) - (SQ \times SP)$$

(b) (RSQ
$$\times$$
 SP) – (AQ \times RSP)

(c)
$$(AQ \times SP) - (SQ \times AP)$$

(d)
$$(SQ \times SP) - (AQ \times SP)$$

- (2) Fixed budget variance is
 - (a) Budgeted cost Standard cost

(b) Budgeted cost – Actual cost

- (c) Actual Cost Budgeted Cost
- (d) $(AQ \times SR)$ Actual Cost
- (3) Idle time variance is
 - (a) Idle time \times actual rate (b) Idle time \times (1-P)
- - (c) Idle time × standard rate (d) Idle time × actual rate ×actual units
- (4) Actual costs can be compared with in order to

Evaluate operating performance.

(a) Standard cost

(b) Predetermined costs

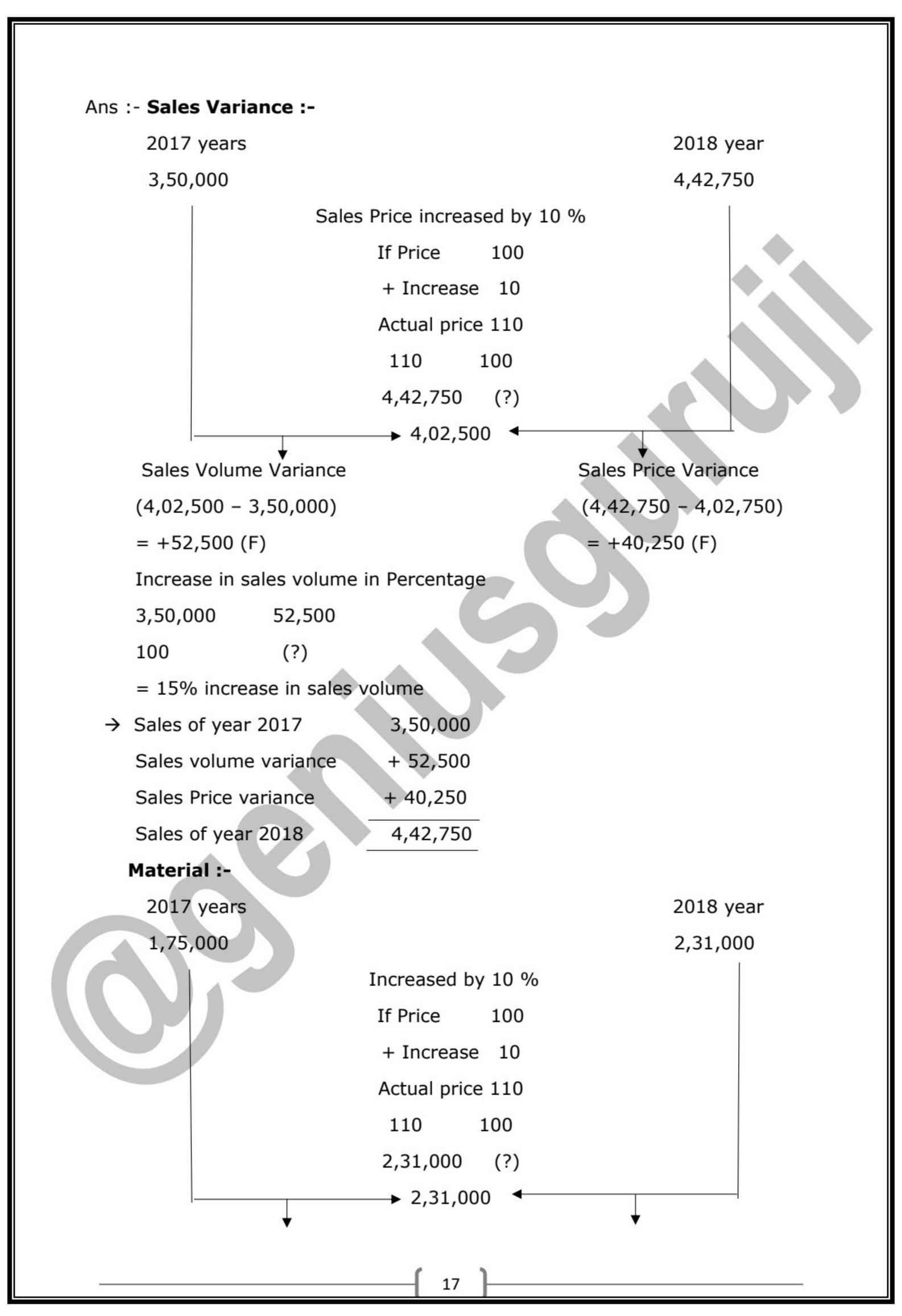
(c) Actual Revenue

- (d) None of above
- (5) The difference between hours paid and hours worked is known as
 - (a) Labour rates variance
- (b) Idle time variance
- (c) Labour efficiency variance
- (d) None of above

Q4:- (A) The trading results of Aditi Ltd. for the year 2017 and 2018 are as under:

	2017 (₹)	2018 (₹)
Material consumed	1,75,000	2,31,000
Wages	1,05,000	1,15,000
Variable overheads	21,000	24,500
Fixed overheads	35,000	42,000
Net profit	14,000	29,750
Sales	3,50,000	4,42,750

Material price and wage rates were increased in 2018 by 10% and sales Price were also increased by 10%. You are management accountant of the Company. The managing director of the company requests you to prepare a statement showing how much each factor contribution to the variation in Profit.



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Material Usage Variance			Material Price Variance
(1,75,000 - 2,10,000)		(2,10,000 - 2,31,000)
= - 35,000 (U)			= - 21,000 (U)
Material of year 2017		1,75,000	
Material usage variance		- 35000 (U)	
Material Price variance		- 21,000 (U)	
Material of year 2018	-	2,31,000	
→ Labour :-	-	51	
Year 2017			Year 2018
1,05,000			1,15,000
Increase in W	Vage rate	increased by 10	%
In volume If	Rate	100 11	0 100
by 15% +	10% incr	ease 10 1,15	,000 (?)
100 115	Actual	110	= 1,00,000
1,05,000 (?)			
= 1,20,750			
Labour volume variance	Labour	efficiency wage	Labour Rate Variance
(1,05,000 - 1,20,750)	(1,20,750	0 - 1,00,000)	(1,00,000 - 1,15,000)
= - 15,750 (U)	= +	20,750 (F)	= - 15,000 (U)
Wages for the year 2017	7	1,05,000	
Wages volume variance		- 15,750 (U))
Wages efficiency variance	ces	+ 20,750 (F)	
Wages Rate variances		- 15,000 (U)	
Wages for year 2018		1,15,000	
→ Variable overhead			
Year 2017			Year 2018
21,000			24,500
Inc	rease in v	volume by 15%	
	100	115	
	21,000	(?)	
			1

18

 24 150 4
= 24.150 ◆

Variable o/h Volume variance

Variable O/h efficiency variance

$$(21,000 - 24,150)$$

$$(24,150 - 24,500)$$

$$= -3,150 (U)$$

$$= -350 (U)$$

Variable Overhead of year 2017

21,000

Variable Overhead volume variances

- 3,150 (U)

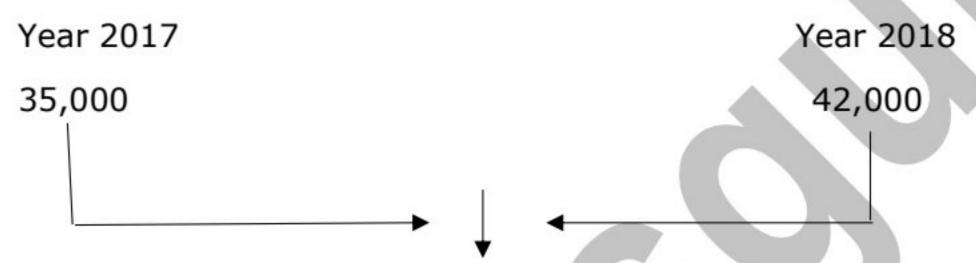
Variable Overhead efficiency variances

- 350 (U)

Variable overhead of year 2018

24,500

→ Fixed overhead :-



Fixed overhead variances :- (35,000 - 42,000) = -7,000 (U)

Fixed overhead for the year 2017

35000

Fixed overhead cost variance

- 7,000

Fixed overhead for the year 2018

42,000

→ Statement showing the variation of Both years

Particulars	Amount	Amount
Profit for the year 2017		14,000
Sales Price variances	+ 52,500	
Sales Price variances	+ 40,250	
Material usage variances	- 35,000	
Material Price variances	- 21,000	
Labour volume variances	- 15,750	
Labour efficiency variances	+ 20,750	
Labour Rate variances	- 15,000	

Profit for the year 2018		30,250
Fixed O/h cost variances	- 7000	16,250
variances		
Variable O/h efficiency	- 350	
Variable O/h volume variances	- 3,150	

(B) Choose the correct option (any three)

- (1) In the formula, C <(1 P) L, "L" denotes
 - (a) Net loss from investigation

(b) Net benefit from investigation

- (C) Cost of investigation
- (d) None of the above
- (2)(1-P) =
 - (a) Probability that variance is uncontrollable.

(b) Probability that variance is controllable.

- (c) Probability that the process is in control.
- (d) None of these
- (3) CUSUM chart is used for

(a) Control chart models

- (b) Materiality significance model
- (c) Statistical significance model
- (d) All of above
- (4) \bar{X} control chart is used for

(a) Control chart model

- (b) Statistical significance model
- (c) Material control model
- (d) All of above
- (5) Which of the following is not a cost-variance investigation model?

(a) Profit volume model

(b) Cost benefit decision model

(c) Control charts model

(d) Materiality significance model