

NG-113

November-2018

M.com., Sem-III

504(EA) : Management Accounting-I

(New)

- Q1. (A)** Paresh Limited manufactures product 'P' and the direct material cost is Budgeted as follows :
Material A : 20 units at ₹ 40 each for every unit of product 'P'.
The price of material A has gone up after the above budget was formed to ₹ 60 per unit. In the light of this information, the management has carried out a market study to confirm that material B can work as substitute and is available at ₹ 52 per unit.
At the end of the budget period the statement of material indicated that product 'P' was produced to the extent of 1000 units by using material A as follows :
Quantity used 22000 units at the cost of ₹ 60.40 per unit.
Analyse the material Cost Variance :
(i) as per the Conventional Approach.
(ii) as per the Opportunity Cost Approach.

Answer

Original Budget		Alternative Budget		Revised Budget		Actual Budget
Units 1	Units 20	Units 1	Units 20	Units 1	Units 20	
1000	?	1000	?	1000	?	
20,000 units × 40		20,000 units × 52		20,000 units × 60		22,000 units × 60.40
₹ 8,00,000/-		₹ 10,40,000/-		₹ 12,00,000/-		₹ 13,28,800/-

↑ ↑ ↑ Unavoidable ↑ ↑ ↑
↑ ↑ ↑ planning ↑ ↑ ↑
↑ ↑ ↑ planning variance ↑ ↑ ↑ operating
↑ ↑ ↑ variance

Operating variances as per conventional Approach

(A) As per the Conventional Approach :-

(i) Material Cost Variances :-

= original cost – Actual cost

= 8,00,000 – 13,28,800

$$= -5,28,800 \text{ (U)}$$

(ii) Material Price Variances :-

$$= \text{Actual Qty (Std. Price - Actual Price)}$$

$$= 22000 (40 - 60.40)$$

$$= 22000 (-20.40)$$

$$= -4,48,800 \text{ (U)}$$

(iii) Material Usage Variances :-

$$= \text{Std. Price (Std. Qty - Actual Qty)}$$

$$= 40 (20000 - 22000)$$

$$= 40 (-2000)$$

$$= -80,000 \text{ (U)}$$

(B) As per the Opportunity Cost Approach

(I) Planning variances :-

(i) Total Planning Variance

$$= \text{Original Cost - Revised Budget Cost}$$

$$= 8,00,000 - 12,00,000$$

$$= -4,00,000 \text{ (U)}$$

(ii) Unavoidable Variance

$$= \text{Original Budget - Alternative Revised Budget}$$

$$= 8,00,000 - 10,40,000$$

$$= -2,40,000 \text{ (U)}$$

(iii) Possibility avoidable variances

$$= \text{Alternative Revised Budget - Revised Budget}$$

$$= 10,40,000 - 12,00,000$$

$$= -1,60,000 \text{ (U)}$$

(II) Operating Variances :-

(i) Material cost variances

$$= \text{Revised Budget Cost - Actual Cost}$$

$$= 12,00,000 - 13,28,800$$

$$= -1,28,800 \text{ (U)}$$

(ii) Material Price Variances :-

$$\begin{aligned} &= \text{Actual Qty (Std. Price - Actual Price)} \\ &= 22000 (60-60.40) \\ &= 22000 (-0.40) \\ &= - 8,800 (U) \end{aligned}$$

(iii) Material Usage Variances :-

$$\begin{aligned} &= \text{Std. Price (Std. Qty - Actual Qty)} \\ &= 60 (20,000-22,000) \\ &= 60 (-2000) \\ &= - 1,20,000 (U) \end{aligned}$$

(B) Select the appropriate alternative : (any four)

(1) Management Accounting is concerned with

- (a) Past decisions
(b) **Internal decision making**
(c) External decision making
(d) None of these

(2) Which method is not of Management Accounting ?

- (a) Standard costing
(b) **Service costing**
(c) Marginal Costing
(d) Decision Accounting

(3) One of the following is not within the scope of management Accounting ?

- (a) Formulation of Policies
(b) **Classification and collection of costs**
(c) Decision making from alternatives course of action
(d) None of these

(4) Operating variance = _____

- (a) Original standards – Revised standards
(b) **Revised standards – Actual standards**
(c) Original standards – Actual standards
(d) None of these

(5) Management Accounting is an extension of

(a) **Financial Accounting**

(b) Cost Accounting

(c) Financial Management

(d) None of these

(6) As per Indian Companies Act, _____ is obligatory.

(a) **Financial Accounts**

(b) Cost Accounts

(c) Management Accounts

(d) None of these

Q2:- (A) Sun Limited has prepared the following sales budget for the first

Months of 2018 :

<u>Month</u>	<u>Sales (Units)</u>
January	10,800
February	15,600
March	12,200
April	10,400
May	9,800

Inventory of finished goods at the end of every month is to be equal to 25% of sales estimate for the next month. On 1st January 2018, there were 2700 units of product on hand. There is a no work in Progress at the end of any month.

Every unit of product requires two types of materials in the following Quantities :

Material A – 4 kg

Material B – 5 kg

Materials equal to one half of the requirement of next month's production are to be in hand at the end of every month. This requirement was also met on 1st January 2018.

Required : Prepare the following budget for the quarter ending 31st March, 2018.

(A) Production Budget (Quantitative)

Answer

Particulars	January	February	March
Sales units	10,800	15,600	12,200
+ Closing stock	<u>3,900</u>	<u>3,050</u>	<u>2,600</u>
	14,700	18,650	14,800
- Opening stock	<u>3,700</u>	→ <u>3,900</u>	→ <u>3,050</u>
Production Units	11,000	14,750	11,750

(B) Material Purchase Budget (Quantitative)

Particular	January	February	March
Material required			
(Pro. Units × Per unit cons.)	(11,000 × 4)	(14,750 × 4)	(11,750 × 4)
Material 'A'	44,000	59,000	47,000
	(11,000 × 5)	(14,750 × 5)	(11,750 × 5)
Material 'B'	55,000	73,750	58,750
Material consumed	99,000	1,32,750	1,05,750
+ Closing stock	66,375	52,875	46,125
	1,65,375	1,85,625	1,51,875
- Opening stock	49,500	66,375	52,875
Material Purchased	1,15,875	1,19,250	99,000

(B) Select the appropriate alternative : (any four)

(1) Master Budget is also known as

(a) Cash Budget

(b) Sales Budget

(c) Summary Budget

(d) None of these

- (2) The responsibility for preparation of Sales Budget of a company is on
- (a) Accountant (b) Budget Expert
(c) Sales Manager (d) None of these
- (3) At 60% capacity factory overheads are ₹ 80,000 and at 80% capacity factory Overheads are ₹ 1,00,000. Amount of fixed factory overhead included in the Above amount would be
- (a) ₹ 1,00,000 (b) ₹ 80,000
(c) ₹ 20,000 (d) None of these
- (4) Appropriation budgets are
- (a) Flexible Budget**
 (b) Incremental Budget
 (c) Static (Fixed) Budget
 (d) Zero Base Budget
- (5) Which of the following item is not included while preparing a Cash Budget?
- (a) Collection from debtors (b) Payment to creditors
(c) Depreciation (d) None of these
- (6) Which of the following is not a type of budget ?
- (a) Sales Budget (b) Cash Budget
(c) Cash Account (d) None of these

Q3:- (A) Following information is obtained from the cost department of Hope Limited :

<u>Standard Cost Card</u>	<u>Per Unit</u>
Material Cost (2kg at ₹10 kg)	20
Direct Wages (hours 2 at ₹ 2 per hour)	4
Variable Overheads (hours 2 at ₹ 2 per hour)	4
Fixed Overheads (hours 2 at ₹ 4 per hour)	8
Total Standard Cost	36
Standard profit per unit	4
Standard selling price per unit	40
Normal production capacity 10,000 units	
Budgeted production and sales 10,000 units	

Actual Data**₹**

Material consumed : 16,500kg at ₹ 9.60 per kg	1,58,400
Direct Wages : 18,000 hours at ₹ 1.60 per hours	28,800
Variable Overheads	32,400
Fixed Overheads	76,000
Actual production and sales (at ₹ 42 per unit)	3,36,000

You are required to compute different variances and reconcile the budgeted Profit with actual profit.

Answer**Step 1:- calculation of Budgeted Profit**

$$\begin{aligned}\text{Budgeted Profit} &= \text{Budgeted Production} \times \text{Std. Profit per unit} \\ &= 10,000 \times 4 \\ &= ₹ 40,000\end{aligned}$$

Step 2:- Calculation of Actual Profit

Particulars	Amount	Amount
Sales (8000 units × 42)		3,36,000
Less:- Total Cost		
Material Consumed (16500 × 9.60)	1,58,400	
Direct Wages (18000 × 1.60)	28,800	
Variable Overheads	32,400	
Fixed Overheads	76,000	
		2,95,600
Actual Profit		40,400

Step 3:- Calculation of variances

(A) Material Variances

→ Std Qty for Actual Production:-

Units	Kg
1	2
8000	?
Ans..	16,000 kg

→ Prepare a table

Standard			Actual		
Qty	Price	Amount	Qty	Price	Amount
16000	10	1,60,000	16500	9.6	1,58,400

→ Calculate Variances :-

(i) Material Cost Variances

$$\begin{aligned} &= \text{Std. Cost} - \text{Actual Cost} \\ &= 1,60,000 - 1,58,400 \\ &= + 1600(\text{F}) \end{aligned}$$

(ii) Material Price Variance

$$\begin{aligned} &= \text{Actual Qty} (\text{Std. Price} - \text{Actual Price}) \\ &= 16,500 (10 - 9.60) \\ &= 16,500 (+0.40) \\ &= + 6,600 (\text{F}) \end{aligned}$$

(iii) Material Usage Variance

$$\begin{aligned} &= \text{Std. Price} (\text{Std. Qty} - \text{Actual Qty}) \\ &= 10 (16000 - 16500) \\ &= 10 (-500) \\ &= - 500 (\text{U}) \end{aligned}$$

(B) Labour Variances :-

→ Std. Hours for Actual Production

Units	Hours
1	2
8000	?
Ans..	16,000 Hours

→ Prepare a table

Standard			Actual		
Hours	Rate	Amount	Hours	Rate	Amount
16,000	2	32,000	18,000	1.60	28,800

→ Labour Variances :-

(i) Labour Cost Variances

$$\begin{aligned} &= \text{Std. Cost} - \text{Actual Cost} \\ &= 32,000 - 28,800 \\ &= + 3200 \text{ (F)} \end{aligned}$$

(ii) Labour Rate Variance

$$\begin{aligned} &= \text{Actual Hours (Std. Rate} - \text{Actual Rate)} \\ &= 18000 (2 - 1.60) \\ &= 18000 (0.40) \\ &= + 7200 \text{ (F)} \end{aligned}$$

(iii) Labour Efficiency Variance

$$\begin{aligned} &= \text{Std. Rate (Std. Hours} - \text{Actual Hours)} \\ &= 2 (16000 - 18000) \\ &= 2 (-2000) \\ &= - 4000 \text{ (U)} \end{aligned}$$

(c) Variable Overhead Variances:-

→ Std. Hours for Actual Production

Units	Hours
1	2
8000	?
Ans..	16,000 Hours

→ Prepare a table

Standard			Actual		
Hours	Rate	Amount	Hours	Rate	Amount
16,000	2	32,000	18,000	1.80	32,400

→ Variable Overhead Variances :-

(i) Variable Overhead Cost Variances

$$= \text{Std. cost} - \text{Actual cost}$$

$$= 32,000 - 32,400$$

$$= - 400(\text{U})$$

(ii) Variable Overhead Expenditure Variance

$$= \text{Actual Hours} (\text{Std. Rate} - \text{Actual Rate})$$

$$= 18000 (2 - 1.80)$$

$$= 18000 (0.20)$$

$$= + 3600 (\text{F})$$

(iii) Variable Overhead Efficiency Variance

$$= \text{Std. Rate} (\text{Std. Hours} - \text{Actual Hours})$$

$$= 2 (16000 - 18000)$$

$$= 2 (-2000)$$

$$= - 4000 (\text{U})$$

(D) Fixed Overhead Variances:-

Budgeted Production = 10,000 units

Actual production = 8,000 units

Std. Rate = 8 Rs. Per unit

Budgeted Fixed Overhead = $(10000 \times 8) = 80,000$

Actual Fixed Overhead = 76,000

(i) Fixed Overhead Total Cost Variances

$$\begin{aligned} &= (\text{Actual Pro.} \times \text{Std. Rate}) - \text{Actual Fixed Overhead} \\ &= (8000 \times 8) - 76,000 \\ &= 64,000 - 76,000 \\ &= -12,000 (\text{U}) \end{aligned}$$

(ii) Fixed Overhead Budget Variance

$$\begin{aligned} &= \text{Budget fixed Overhead} - \text{Actual Fixed overhead} \\ &= 80,000 - 76,000 \\ &= +4,000 (\text{F}) \end{aligned}$$

(iii) Fixed Overhead Volume Variance

$$\begin{aligned} &= \text{Std. Rate} (\text{Actual Pro.} - \text{Budgeted Pro.}) \\ &= 8 (8000 - 10000) \\ &= 8 (-2000) \\ &= -16,000 (\text{U}) \end{aligned}$$

(E) Sellers Profit Variances:-

(i) Sellers Price Variances

$$\begin{aligned} &= \text{Actual Sales Qty} (\text{Actual sales Price} - \text{Budgeted Sales Price}) \\ &= 8000 (42 - 40) \\ &= 8000 (2) \\ &= +16,000 (\text{F}) \end{aligned}$$

(ii) Sales Margin Volume Variance

$$\begin{aligned} &= \text{Std. Profit per unit} (\text{Actual Qty} - \text{Budgeted Qty}) \\ &= 4 (8,000 - 10,000) \\ &= -8,000 (\text{U}) \end{aligned}$$

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

Particulars	Amount	Amount
Budgeted Profit		40,000
Sales Price Variances	16,000	
Sales Margin Volume Variance	- 8,000	8,000
Standard Profit		48,000
Material Price Variance	6,600	
Material Usage Variance	- 5,000	
Labour Rate Variance	7,200	
Labour Efficiency Variance	- 4,000	
Variable O/h Expenditure Variance	3,600	
Variable O/h Efficiency Variance	- 4,000	
Fixed O/h Budget Variance	4,000	
Fixed O/h Volume Variance	- 16,000	-7,600
Actual Profit		40,400

(B) Select the appropriate alternative (any three):-

(1) Labour Cost Variance is the difference between

- (a) Fixed Labour cost and Variable labour cost
- (b) Estimate Labour cost and standard labour cost

(c) Standard Labour cost and Actual labour cost

(d) None of these

(2) Material Cost Variance =

- (a) Material usage variance + Material yield variance
- (b) Material price variance + Material yield variance

(c) Material price variance + Material usage variance

(d) None of these

(3) The difference between hours paid and hours worked is known as

- (a) Labour Rates variance
- (b) Labour efficiency variance
- (c) Idle time variance**
- (d) None of these

(4) Fixed Budget Variance =

- (a) Budget cost – Actual cost**
- (b) Actual cost – standard cost
- (c) Actual hours (Standard rate – Actual rate)
- (d) None of these

(5) Sales Price Variance =

- (a) Actual quantity (Actual price – Standard price)**
- (b) Actual quantity (Standard price – Actual price)
- (c) Standard quantity (Actual price – Standard price)
- (d) None of these

Q4:- (A) MNC Company Limited Operates a standard costing system in its factory.

Based on its past record, it appears that the material cost variance happens To be ₹ 12,000 a month, on an average. If the cause of the variance can Be found and is correctible, the correction process will require two months. This correction is likely to have favourable effect for a period of two months. The investigation of variance will cost ₹ 2,000. Correction of the cause of Variance will cost ₹ 4,000 and the probability for finding the cause is 0.40.

Would you recommend launching an investigation? Why ?

What is the minimum probability of finding a correctable cause that would Justify and investigation ?

Answer

C= cost of investigation = 2000

P = Probability that variance is uncontrollable= 0.60

(1-P) = Probability that variance is controllable =0.40

L = Total benefit expected – cost of correction

$$= (12,000 \times 2) - 400$$

$$= 28000 - 4000$$

$$= 20,000$$

$$C < (1-P) L$$

$$2000 < (0.40) (20,000)$$

$$2000 < 8000$$

Recommend launching an investigation because Net benefit expected is More than cost of investigation.

If any variance cost of investigation = 2000

+ Cost of correction of variance = 4000 it means

Total cost = 6000 or more variance is unfavourable then variance' investigation.

(B) Select the appropriate alternative : (any three)

(1) In the formula $C < (1-P) L$, L denote for

(a) Cost of investigation

(b) Net benefit

(c) Net loss

(d) None of these

(2) Which of the following is not a cost variance investigation model ?

(a) Profit volume model

(b) Control charts model

(c) Materiality significance model

(d) None of these

(3) $(1-P) =$

(a) Probability that the variance is controllable

(b) Probability that the variance is uncontrollable

(c) Probability that the process is in control

(d) None of these

(4) In the formula $C < (1-P)L$, C denote for

(a) Cost of investigation

(b) Cost of corrective measures

(c) Cost of control

(d) None of these

(5) CUSUM chart is used for

(a) Control charts model

(b) Statistical significance model

(c) Materiality significance model

(d) None of these