

504 - Management A/c - Paper Solution December 2024

Example - 1:

SQ	SP	AQ	AP	RSP	Substitute
30,000 (1,000 × 30)	60	33,000	90.6	90	78

(i) Traditional/Conventional Approach:

$$\begin{aligned}\text{(a) Material Cost Variance} &= (\text{SQ} \times \text{SP}) - (\text{AQ} \times \text{AP}) \\ &= (30,000 \times 60) - (33,000 \times 90.60) \\ &= 1,800,000 - 2,989,800 \\ &= \mathbf{-1,189,800 \text{ (U)}}\end{aligned}$$

$$\begin{aligned}\text{(b) Material Price Variance} &= \text{AQ} (\text{SP} - \text{AP}) \\ &= 33,000 (60 - 90.60) \\ &= \mathbf{-1,009,800 \text{ (U)}}\end{aligned}$$

$$\begin{aligned}\text{(c) Material Usage Variance} &= \text{SP} (\text{SQ} - \text{AQ}) \\ &= 60 (30,000 - 33,000) \\ &= \mathbf{-180,000 \text{ (U)}}\end{aligned}$$

(ii) Opportunity Cost Approach:

(a) Planning Variance:

Original Standard Cost (30,000 × 60)	1,800,000
Less: Revised Standard Cost (30,000 × 90)	2,700,000
	<u>-900,000 (U)</u>

→ Unavoidable Planning Variance:

Original Standard Cost (30,000 × 60)	1,800,000
Less: Cost of Alternate Material (30,000 × 78)	2,340,000
	<u>-540,000 (U)</u>

→ Possibly Avoidable Planning Variance::

Cost of Alternate Material (30,000 × 78)	2,340,000
Less: Revised Standard Cost (30,000 × 90)	2,700,000
	<u>-360,000 (U)</u>

(b) Operating Variance:

$$\begin{aligned}\text{(1) Material Cost Variance} &= (\text{RSQ} \times \text{RSP}) - (\text{AQ} \times \text{AP}) \\ &= (30,000 \times 90) - (33,000 \times 90.60) \\ &= 2,700,000 - 2,989,800 \\ &= \textbf{-289,800 (U)}\end{aligned}$$

$$\begin{aligned}\text{(2) Material Price Variance} &= \text{AQ} (\text{RSP} - \text{AP}) \\ &= 33,000 (90 - 90.60) \\ &= \textbf{-19,800 (U)}\end{aligned}$$

$$\begin{aligned}\text{(3) Material Usage Variance} &= \text{RSP} (\text{RSQ} - \text{AQ}) \\ &= 90 (30,000 - 33,000) \\ &= \textbf{-270,000 (U)}\end{aligned}$$

Example - 2:

(1) Production Budget for December:

Particulars	PT Product Tons	MN Product Tons
Budgeted Sales	120	400
Add: Closing Stock	10	120
	130	520
Less: Opening Stock	20	100
Required Production	110	420

(2) Material Requirement Budget for December:

Particulars	P Tons	T Tons	M Tons	N Tons
Raw Material required for Production during the month				
PT Product (110 tons x 80% P and 20% T)	88	22	-	-
MN Product (420 tons x 50% M and 50% N)	-	-	210	210
Raw Material Requirement (in tons)	88	22	210	210
x Price per ton	250	200	50	100
Raw Material Requirement (in Rs.)	22,000	4,400	10,500	21,000

So, Total Requirement Rs. 57,900

(3) Raw Material Purchase Budget for December:

Particulars	P Tons	T Tons	M Tons	N Tons
Raw Material Requirement (in tons)	88	22	210	210
Add: Closing Stock required	40	80	600	400
	128	102	810	610
Less: Opening Stock	30	20	400	500
Raw Material Purchases (in tons)	98	82	410	110
x Price per ton	250	200	50	100
Raw Material Requirement (in Rs.)	24,500	16,400	20,500	11,000

So, Total Requirement Rs. 72,400

Example - 3:

Necessary Accounts as per Partial Plan in the books of Manoj Ltd.

Material Ledger Control Account

Particulars	Rs.	Particulars	Rs.
To General Ledger Adj. A/c (Std.)	36,000		
To General Ledger Adj. A/c (Price + Usage Variance) (400 + 600)	1,000	By W-I-P A/c (Actual)	37,000
	37,000		37,000

Labour Control Account

Particulars	Rs.	Particulars	Rs.
To General Ledger Adj. A/c (Std.)	43,200	By General Ledger Adj. A/c (Rate Variance)	400
To General Ledger Adj. A/c (Efficiency Variance)	800	By W-I-P A/c (Actual)	43,600
	44,000		44,000

Variable Overheads Control Account

Particulars	Rs.	Particulars	Rs.
To General Ledger Adj. A/c (Std.)	54,000	By General Ledger Adj. A/c (Expenses Variance)	1,000
To General Ledger Adj. A/c (Efficiency Variance)	1,200	By W-I-P A/c (Actual)	54,200
	55,200		55,200

Fixed Overheads Control Account

Particulars	Rs.	Particulars	Rs.
To General Ledger Adj. A/c (Std.)	32,000		
To General Ledger Adj. A/c (Expenses Variance)	600	By W-I-P A/c (Actual)	32,600
	32,600		32,600

Work-in-Progress Account

Particulars	Rs.	Particulars	Rs.
To Material Ledger Control A/c	37,000	By Material Price Variance	400
To Labour Control A/c	43,600	By Material Usage Variance	600
To Variable Overheads Control A/c	54,200	By Labour Efficiency Variance	800
To Fixed Overheads Control A/c	32,600	By Variable Overheads Efficiency Variance	1,200
To Labour Rate Variance	400	By Fixed Overheads Expenses Variance	600
To Variable Overheads Expenses Variance	1,000	By Finished Goods Ledger Control A/c	165,200
	168,800		168,800

Finished Goods Ledger Control Account

Particulars	Rs.	Particulars	Rs.
To Work-in-Progress A/c	165,200	By Cost of Sales A/c	165,200
	165,200		165,200

Cost of Sales Account

Particulars	Rs.	Particulars	Rs.
To Finished Goods Ledger Control A/c	165,200	By General Ledger Adj. A/c (Sales)	240,000
To Costing P & L A/c	74,800		
	240,000		240,000

Material Price Variance Account

Particulars	Rs.	Particulars	Rs.
To Work-in-Progress A/c	400	By Costing P & L A/c	400
	400		400

Material Usage Variance Account

Particulars	Rs.	Particulars	Rs.
To Work-in-Progress A/c	600	By Costing P & L A/c	600
	600		600

Labour Rate Variance Account

Particulars	Rs.	Particulars	Rs.
To Costing P & L A/c	400	By Work-in-Progress A/c	400
	400		400

Labour Efficiency Variance Account

Particulars	Rs.	Particulars	Rs.
To Work-in-Progress A/c	800	By Costing P & L A/c	800
	800		800

Variable Overheads Expenses Variance Account

Particulars	Rs.	Particulars	Rs.
To Costing P & L A/c	1,000	By Work-in-Progress A/c	1,000
	1,000		1,000

Variable Overheads Efficiency Variance Account

Particulars	Rs.	Particulars	Rs.
To Work-in-Progress A/c	1,200	By Costing P & L A/c	1,200
	1,200		1,200

Fixed Overheads Expenses Variance Account

Particulars	Rs.	Particulars	Rs.
To Work-in-Progress A/c	600	By Costing P & L A/c	600
	600		600

Costing Profit & Loss Account

Particulars	Rs.	Particulars	Rs.
To Material Price Variance	400	By Labour Rate Variance	400
To Material Usage Variance	600	By Variable Overheads	
To Labour Efficiency Variance	800	Expenses Variance	1,000
To Variable Overheads			
Efficiency Variance	1,200		
To Fixed Overheads			
Expenses Variance	600		
To General Ledger Adj. A/c	72,600	By Cost of Sales A/c	74,800
(Actual Profit)			
	76,200		76,200

General Ledger Adjustment Account

Particulars	Rs.	Particulars	Rs.
To Cost of Sales A/c	240,000	By Material Ledger	
		Control A/c (Standard)	36,000
By Labour Control A/c		By Labour Control A/c	
(Rate Variance)	400	(Standard)	43,200
By Variable Overheads		By Variable Overheads	
Control A/c (Variance)	1,000	Control A/c (Standard)	54,000
		By Fixed Overheads	
		Control A/c (Standard)	32,000
		By Material Ledger	
		Control A/c (Variance)	
		(400 + 600)	1,000
		By Labour Control A/c	
		(Efficiency Variance)	800
		By Variable Overheads	
		Control A/c (Variance)	1,200
		By Fixed Overheads	
		Control A/c (Variance)	600
		By Costing P & L A/c	72,600
	241,400		241,400

Example - 4:

Cost of Investigation = $C = ₹ 2,000$

Probability for finding cause = $(1 - p) = 0.4$

Benefit = 1 month variance = ₹ 12,000

Cost of Corrective action = ₹ 4,000

So, $L = \text{Benefit} - \text{Cost of corrective action} = ₹ 12,000 - ₹ 4,000 = ₹ 8,000$

Expected value of benefit = $(1 - p) L$

= $0.4 (8,000)$

= ₹ 3,200

Yes, The variance must be investigated, because the cost of investigation is ₹ 2,000, while the expected value of benefit is ₹ 3,200.

Thus, the inequality of $C < (1 - p) L$ is satisfied.

→ Here, the probability of finding a corrective cause has been asked, that is, the probability of variance being controllable, so we have to find out the value of $(1 - p)$.

→ To find out the Minimum probability $(1 - p)$, we make use of the formula

$$C = (1 - p) L$$

$$2,000 = (1 - p) 8,000$$

$$(1 - p) = 2,000 / 8,000$$

$$(1 - p) = 0.25$$