

## CMA TEST- 3 (Solution)

Time Allowed: 35 Minutes

TOPIC: STANDARD COSTING

Total Marks: 20 Marks

Answer to Question no.1

**Limitations of Standard Costing**

- 1. More Expenses:-**The Standard are fixed for price and quality of raw material, rate, and efficiency level of workers, variable and fixed overheads. So, the whole procedure will involve additional cost since the fixing of standards require high order of skill ( i.e. experts).
- 2. Frequent Revision of Standards:-**Future is uncertain and business environment is fast changing. So, the standards may have to be revised at regular intervals. Moreover, the revision of standards is a tedious process.
- 3. Bias in fixing the responsibility:-** The causes for the variances may be due to controllable and uncontrollable factors. But, determination of such factors has personal bias and no clear cut norms. Hence, it is very difficult to fix the responsibility of any executive.
- 4. Effect on psychology of employees:-**Such standards must be setup which is attainable with reasonable skill and efforts. If standards are fixed at higher level, the employees may have resistance to accept such standards. So, in such case, the standard costing may prove to be a matter of discouragement among employees.
- 5. No Freedom at work:-**Whenever the standards are established, the employees cannot work at their own wishes and there is no possibility of developing new ideas.

Answer to Question no.2:

**Material price variance at the time of Purchase**

$$= \left( \begin{array}{c} \text{Standard} \\ \text{Price} \end{array} - \begin{array}{c} \text{Actual} \\ \text{Price} \end{array} \right) \left( \begin{array}{c} \text{Actual Quantity} \\ \text{Purchased} \end{array} \right)$$

$$\text{Material X} = (\text{₹ } 1.90/\text{kg.} - \text{₹ } 2/\text{kg.}) (2,000 \text{ kgs.}) = \text{₹ } 200 \text{ (A)}$$

$$\text{Material Y} (\text{₹ } 1.30/\text{kg.} - \text{₹ } 1.25/\text{kg.})(5,000 \text{ kgs.}) = \text{₹ } 250 \text{ (F)}$$

$$\underline{\text{₹ } 50 \text{ (F)}}$$

**Material usage variance**

$$= \left( \begin{array}{c} \text{Standard} \\ \text{Price} \end{array} \right) \left( \begin{array}{c} \text{Standard Quantity} \\ \text{for Actual Output} \end{array} - \begin{array}{c} \text{Actual Quantity} \\ \text{Consumed} \end{array} \right)$$

$$\text{Material X} = (\text{₹ } 1.90/\text{kg.}) (2,405 \text{ kgs.} - 2,250 \text{ kgs.}) = \text{₹ } 294.5 \text{ (F)}$$

$$\text{Material Y} = (\text{₹ } 1.30/\text{kg.}) (3,680 \text{ kgs.} - 3,700 \text{ kgs.}) = \text{₹ } 26 \text{ (A)}$$

$$\underline{\text{₹ } 268.5 \text{ (F)}}$$

**Actual Quantity Consumed**

$$= \text{Opening Stock at Factory} + \text{Raw Material Issued to Factory} - \text{Closing Stock of Raw Material}$$

$$X = 300 + 2,150 - 200 = 2,250 \text{ kgs.}$$

$$Y = 1,000 + 3,950 - 1,250 + 3,700 \text{ kgs.}$$

$$\text{Standard Quantity for Actual Output} = \frac{\text{Actual Budgeted}}{\text{Budgeted}} \times \text{Budgeted Input P.u. of Output}$$

**Material X**

$$\text{Product A} = 1,130 \text{ Units} \times 1 \text{ kg. p.u.} = 1,130 \text{ kgs}$$

$$\text{Product B} = 2,550 \text{ Units} \times 0.5 \text{ kg. p.u.} = 1,275 \text{ kgs.}$$

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$$2,405 \text{ kgs.}$$

**Material Y**

$$A = 1,130 \text{ Units} \times 1 \text{ kg.} = 1,130 \text{ kgs}$$

$$B = 2,550 \text{ Units} \times 1 \text{ kg.} = 2,550 \text{ kgs.}$$

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$$3,680 \text{ kgs.}$$

**Answer to Question no.3:**

Worker	SR × SHAO	SR × RSH	SR × AHW	AR × AHP	AR × AHP
	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>5</sub>
Skilled	45 × 2,340 = 1,05,300	45 × 2,470 = 1,11,150	45 × 1,900 = 85,500	45 × 2,000 = 90,000	50 × 2,000 = 1,00,000
Semi-skilled	30 × 720 = 21,600	30 × 760 = 22,800	30 × 1,140 = 34,200	30 × 1,200 = 36,000	35 × 1,200 = 42,000
Un-skilled	15 × 540 = 8,100	15 × 570 = 8,550	15 × 760 = 11,400	15 × 800 = 12,000	10 × 800 = 8,000
	<b>1,35,000</b>				

Actual Hours Paid (AHP)	Actual Hours Worked (AHW)
Skilled = 50 × 40 = 2,000 hrs.	Skilled = 50 × 38 = 1,900 hrs.
Semi-skilled = 30 × 40 = 1,200 hrs.	Semi-skilled = 30 × 38 = 1,140 hrs.
Un-skilled = 20 × 40 = 800 hrs.	Un-skilled = 20 × 38 = 760 hrs.

**Revised Standard Hours (RSH)**

Total of AHW = 3,800 hrs.

Budgeted Ratio = 65:20:15

Skilled = 2,470 hrs.

Semi-skilled = 760 hrs.

Un-skilled = 570 hrs.

**Budgeted Hours Per Unit of Output**

Output	Budgeted hours			
	Skilled	Semi-skilled	Un-skilled	Total
2,000 units	65 × 40 = 2,600 hrs.	20 × 40 = 800 hrs.	15 × 40 = 600 hrs.	4,000 hrs.
1 unit	1.3 hrs.	0.4 hr.	0.3 hr.	2 hrs.

**SHAO = Actual Output × Budgeted hours per unit**

Skilled = 1,800 × 1.3 = 2,340 hrs.

Semi-skilled = 1,800 × 0.4 = 720 hrs.

Un-skilled = 1,800 × 0.3 = 540 hrs.

**Computation of Labour Cost Variances**

Worker	DLCV	DLRV	ITV	DLEV	DLMV	DLYV
	(L <sub>1</sub> - L <sub>5</sub> )	(L <sub>4</sub> - L <sub>5</sub> )	(L <sub>3</sub> - L <sub>4</sub> )	(L <sub>1</sub> - L <sub>3</sub> )	(L <sub>2</sub> - L <sub>3</sub> )	(L <sub>1</sub> - L <sub>2</sub> )
Skilled	₹ 5,300 (F)	₹ 10,000 (A)	₹ 4,500 (A)	₹ 19,800 (F)	₹ 25,650 (F)	₹ 5,850 (A)
Semi-skilled	₹ 20,400 (A)	₹ 6,000 (A)	₹ 1,800 (A)	₹ 12,600 (A)	₹ 11,400 (A)	₹ 1,200 (A)
Un-skilled	₹ 100 (F)	₹ 4,000 (F)	₹ 600 (A)	₹ 3,300 (A)	₹ 2,850 (A)	₹ 540 (A)
	<b>₹ 15,000 (A)</b>	<b>₹ 12,000 (A)</b>	<b>₹ 6,900 (A)</b>	<b>₹ 3,900 (F)</b>	<b>₹ 11,400 (F)</b>	<b>₹ 7,500 (A)</b>

**Alternative Method of Calculating DLYV**

DLYV = (Standard cost per unit) (Actual Output - Expected Output in Actual Input)

$$= \left( \frac{₹ 1,35,000}{1,800 \text{ Units}} \right) \left( 1,800 \text{ Units} - \frac{3,800 \text{ hrs.}}{2 \text{ hrs. p.u.}} \right) = (₹ 75 \text{ p.u.}) (1,800 \text{ Units} - 1,900 \text{ Units}) = ₹ 7,500 (A)$$