

CMA TEST- 4 (Solution)		
Time Allowed: 50 mint.	July 08, 2018	Total Marks: 30 Marks

Answer to Question no.1: Various Type of Standards

- (i) **Basic standard:** These are long terms standards and remains unchanged for a long period of time.
- (ii) **Ideal standards:** The standards to be attained under the most favourable conditions possible.
- (iii) **Normal standards:** Such standards are based on average performance in the past. They are attainable under the normal conditions.
- (iv) **Attainable standards:** The standards which can be achieved with reasonable efforts. They are based on practical considerations and they are also called the expected or practical standards.
- (v) **Loose or lax standards:** When the standards are deliberately set below efficiency level to show favourable variances, they are called the loose or lax standards.
- (vi) **Revised standards:** When the standards are changed to correspond with the current conditions, they are called the revised standards.
- (vii) **Current standards:** Standards set for the current period are known as current standard.

Answer to Question no.2:

Material cost variance

SP × SQAQ	SP × RSQ	SP × AQ	AP × AQ
M ₁	M ₂	M ₃	M ₄
₹ 4.20 × 25,600 lbs. = ₹ 1,07,520	Nil	₹ 4.20 × 25,700 lbs = ₹ 1,07,940	₹ 4.5 × 25,700 lbs. = ₹ 1,15,650

SQAQ = Actual output × Budgeted input per unit = 5,120 pieces × 5 lbs. = 25,600 lbs.

DMCV = M₁ – M₄ = 1,07,520 – 1,15,650 = ₹ 8,130 (A)

DMPV = M₃ – M₄ = 1,07,940 – 1,15,650 = ₹ 7,710 (A)

DMUV = M₁ – M₃ = 1,07,520 – 1,07,940 = ₹ 420 (A)

Labour cost variances

SR × SHAO	SR × RSH	SR × AH	AR × AH
L ₁	L ₂	L ₃	L ₄
₹ 3 × 15,360 hrs. = ₹ 46,080	Nil	₹ 3 × 15,150 hrs. = ₹ 45,450	₹ 3.2 × 15,150 hrs. = ₹ 48,480

SHAO = 5,120 pcs. × 3 hrs. per pcs. = 15,360 hrs.

DLCV = L₁ – L₄ = 46,080 – 48,480 = ₹ 2,400 (A)

DLRV = L₃ – L₄ = 45,450 – 48,480 = ₹ 3,030 (A)

DLEV = L₁ – L₃ = 46,080 – 45,450 = ₹ 630 (F)

Answer to Question no.3:

Worker	SR × SHAO	SR × RSH	SR × AHW	AR × AHP	AR × AHP
	L ₁	L ₂	L ₃	L ₄	L ₅
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
	1,35,000				

Actual Hours Paid (AHP)	Actual Hours Worked (AHW)
Skilled = 50 × 40 = 2,000 hrs. Semi-skilled = 30 × 40 = 1,200 hrs. Un-skilled = 20 × 40 = 800 hrs.	Skilled = 50 × 38 = 1,900 hrs. Semi-skilled = 30 × 38 = 1,140 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 ₁ - L ₅)	(L ₄ - L ₅)	(L ₃ - L ₄)	(L ₁ - L ₃)	(L ₂ - L ₃)	(L ₁ - L ₂)
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)
	₹ 15,000 (A)	₹ 12,000 (A)	₹ 6,900 (A)	₹ 3,900 (F)	₹ 11,400 (F)	₹ 7,500 (A)

Alternative Method of Calculating DLYV

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

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

Answer to Question no.4:

Standard Cost Card

Particulars	₹
Direct Material Cost (10 pcs. × 4 /pcs.)	40
Direct Labour (2.5 hrs. × ₹ 4)	10
Overheads ((2.5 hrs. × ₹ 6)	15
	65

Material Variance:-

SP × SQAQ	SP × RSQ	SP × AQ	AP × AQ
₹ 4 × 18,000 = 72,000	NIL	₹ 4 × 19,000 = 76,000	₹ 4.4 × 19,000 = 83,600

Actual Price = ₹ 4.4

SQAQ = 1,800 × 10 = 18,000

DMCV = M1 – M4 = 72,000 – 83,600 = ₹ 11,600 (A)

DMPV = M3 – M4 = 76,000 – 83,600 = ₹ 7,600 (A)

DMPV = M1 – M3 = 72,000 – 76,000 = ₹ 4,000 (A)

Labour Variance:-

SR × SHAO	SR × RSH	SR × AH	AR × AH
₹ 6 × 4,500 = 27,000	NIL	₹ 6 × 4,950 = 29,700	₹ 5 × 4,950 = 24,750

SHAO = 1,800 × 2.5 = 4,500 hrs.

DLCV = L1 – L4 = ₹ 27,000 – 24,750 = ₹ 2,250 (F)

DLRV = L3 – L4 = ₹ 29,700 – 24,750 = ₹ 4,950 (F)

DLEV = L1 – L3 = ₹ 27,000 – 29,700 = ₹ 2,700 (A)

Factory Overhead Variance:-

Output Absorbed	Input Absorbed	Budget	Actual
₹ 15 × 1,800 = 27,000	₹ 6 × 4,950 = 29,700	40,000	44,000

FO Cost variance = FO1 – FO4 = 27,000 – 44,000 = ₹ 17,000 (A)

FO Expenditure Variance = FO3 – FO4 = 40,000 – 44,000 = ₹ 4,000 (A)

FO Volume Variance = FO1 – FO3 = 27,000 – 40,000 = ₹ 13,000 (A)

FO Efficiency Variance = FO1 – FO2 = 27,000 – 29,700 = ₹ 2,700 (A)

FO Capacity Variance = FO2 – FO3 = 29,700 – 40,000 = ₹ 10,300 (A)