

CHAPTER-11

LABOUR COST CONTROL

Ans.1. Working notes :

1. Computation of time saved (in hours) per month:
 - = (Standard production time of 6,120 units – Actual time taken by the workers)
 - = (6,120 units × 1.975 hours – 24 days × 8 hrs per day × 50 skilled workers)
 - = (12,087 hours – 9,600 hours)
 - = 2,487 hours

2. Computation of bonus for time saved hours under Halsey and Rowan schemes:

| | | |
|---------------------------|---|--|
| Time saved hours | = | 2,487 hours |
| (Refer to working note 1) | | |
| Wage rate per hour | = | ₹ 30 |
| Bonus under Halsey Scheme | = | ½ × 2,487 hours × ₹ 30 |
| (With 50% bonus) | = | ₹ 37,305 |
| Bonus under Rowan Scheme | = | $\frac{\text{Time saved}}{\text{Time allowed}} \times \text{Time taken} \times \text{Rate per hour}$ |
| | = | $\frac{2,487 \text{ hours}}{12,087} \times 9,600 \text{ hours} \times ₹ 30$ |
| | = | ₹ 59,258.38 P. |

- (i) **Computation of effective rate of earnings under the Halsey and Rowan schemes :**

| | | |
|---|---|---|
| Total earnings (under Halsey scheme) | | |
| (Refer to working note 2) | = | Time wages + Bonus |
| | = | $\frac{24 \text{ days} \times 8 \text{ hours} + 50 \text{ skilled workers} \times ₹ 30 + ₹ 37,305}{}$ |
| | = | ₹ 2,88,000 + ₹ 37,305 = ₹ 3,25,305 |
| Total earnings (under Rowan scheme) | = | Time wages + Bonus |
| (Refer to working note 2) | = | ₹ 2,88,000 + ₹ 59,258.38 |
| | = | ₹ 3,47,258.38 |
| Effective rate of earnings per hour (under Halsey Plan) | = | ₹ 33.89 |
| (₹ 3,25,305 / 9,600 hrs) | | |
| Effective rate of earnings per hour (under Rowan Plan) | = | ₹ 36.17 |
| (₹ 3,47,258.38 / 9,600 hrs) | | |

(iii) **Savings to the ZED Ltd., in terms of direct labour cost per piece :**

| | |
|---|--------|
| | ₹ |
| Direct labour cost (per unit) under time wages system (1,975 time per unit × ₹ 30) | 59.25 |
| Direct labour cost (per unit) under Halsey Plan (₹ 3,25,305 / 6,120 units) | 53.15 |
| Direct labour cost (per unit) under Rowan Plan (₹ 3,47,258.38 / 6,120 units) | 56.74 |
| Saving of direct labour cost under: | |
| * Halsey Plan (₹ 59.25 – 53.15) | ₹ 6.10 |
| * Rowan Plan (₹ 59.25-56.74) | ₹ 2.51 |

(iv) **Advise to ZED Ltd: (about the selection of the scheme to fulfill assurance)**
 Halsey scheme brings more savings to the management of ZED Ltd., over the present earnings of ₹ 2,88,000 but the other scheme viz Rowan fulfils the promise of 20% increase over the present earnings of ₹ 2,88,000 by paying 20.58% in the form of bonus. Hence Rowan Plan may be adopted.

Ans.2. (i) Computation of wages of each worker under guaranteed hourly rate basis

| Workers | Actual hours worked in a week | Hourly Rate of wages ₹ | Wages ₹ |
|---------|----------------------------------|---------------------------|-----------------|
| (a) | (b) | (c) | (d) = (b) × (c) |
| A | 38 | 6.00 | 228.00 |
| B | 40 | 5.00 | 200.00 |
| C | 34 | 7.20 | 244.80 |

(ii) **Computation of wages of each worker under piece work earnings basis**

| Product per unit | Piece rate | Worker A | | Worker B | | Worker C | |
|---------------------------|------------|----------|-----------------|----------|-----------------|----------|-----------------|
| | | Units | Wages | Units | Wages | Units | Wages |
| | | ₹ | | ₹ | | ₹ | |
| (Refer to working note 1) | | | | | | | |
| (a) | (b) | (c) | (d) = (b) × (c) | (e) | (f) = (b) × (e) | (g) | (h) = (b) × (g) |
| P | 1.20 | 21 | 25.20 | — | — | 60 | 72 |
| Q | 1.80 | 36 | 64.80 | — | — | 135 | 243 |
| R | 3.00 | 46 | 138.00 | 25 | 75 | — | — |

Since each worker has been guaranteed at 75% of basic pay, if his earnings are less than 50% of basic pay, therefore, workers A and C will be paid the wages as computed viz., ₹ 228 and ₹ 315 respectively. The computed wage of worker B is ₹ 75 which is less than 50% of basic pay viz., ₹ 100 therefore he would be paid 75% × ₹ 200 or ₹ 150.

Working Notes :

1. **Piece rate / per unit**

| Product | Standard time per unit in minutes | Piece rate each minute Rs. | Piece rate per unit ₹ |
|---------|-----------------------------------|----------------------------|-----------------------|
| (a) | (b) | (c) | (d) = (b) × c |
| P | 12 | 0.10 | 1.20 |
| Q | 18 | 0.10 | 1.80 |
| R | 30 | 0.10 | 3.00 |

2. **Time allowed to each worker**

Worker A = 21 units × 12 minutes + 36 units × 18 minutes + 46 units × 30 minutes
 = 2,280 minutes = 38 hours

Worker B = 25 units × 30 minutes = 750 minutes = 12.5 hours

Worker C = 60 units × 12 minutes + 135 units × 18 minutes
 = 720 minutes + 2,430 minutes = 3,150 minutes = 52.50 hours

3. **Computation of wages of each worker under Premium bonus basis (where each worker receives bonus based on Rowan Scheme)**

| Workers | Time allowed hours (Refer to W. Note 2) | Time taken hours | Time saved hours | Wage rate / hour | Earnings | Bonus earning & bonus | Total of |
|---------|--|------------------|------------------|------------------|----------|-----------------------|----------|
| | | | | ₹ | ₹ | ₹ | ₹ |
| A | 38.00 | 38.00 | — | 6.00 | 228.00 | — | 228.00 |
| B | 12.50 | 40.00 | — | 5.00 | 200.00 | — | 200.00 |
| C | 52.50 | 34.00 | 18.50 | 7.20 | 244.80 | 86.26 | 331.06 |

Ans.3. Earning per hour under Halsey (50% sharing) Bonus Scheme

Time allowed for actual weekly production = $\frac{200 \text{ units} \times 18 \text{ minutes}}{60 \text{ minutes}}$

(Refer to Working Note 1) = 60 hours

Time saved = Time allowed - Actual time taken
 = 60 hours - 45 hours = 15 hours

Earning = (Hours worked × Rate per hour) + ½ (Time saved) × Rate per hour
 = 45 hours × ₹ 1.80 + ½ × 15 hour × ₹ 1.80

(Refer to Working Note 2)
 = ₹ 81 + ₹ 13.50 = ₹ 94.50

Earnings (per hour) = $\frac{₹ 94.50}{45 \text{ hours}}$ = ₹ 2.10 per hour

Earnings per hour under Rowan Bonus Scheme

$$\begin{aligned} \text{Earnings} &= \text{Hours worked} \times \text{Rate per hour} + \frac{\text{Time saved}}{\text{Time allowed}} \times \text{Time taken} \times \text{Rate per hr.} \\ &= 45 \text{ hours} \times ₹ 1.80 + \frac{15 \text{ hours}}{60 \text{ hours}} \times 45 \text{ hours} \times ₹ 1.80 \\ \text{Earning per hour} &= \frac{₹ 94.50}{45 \text{ hours}} = ₹ 2.10 \text{ per hour} \end{aligned}$$

Working Notes :

1. Expected time to produce one unit under incentive scheme = 15 × 120 minutes
= 18 minutes
2. Wage rate per hour (₹ 81/45 hours) = ₹ 1.80

Ans.4. Standard Production = 120 Units
 Actual Production = 144 Units
 Efficiency Ratio = $\frac{144}{120} \times 100 = 120\%$

That means production has increased by 20%.

| | | | | | |
|-------------|---------------------|----------|----------|----------|--------------|
| | Production Increase | : | Bonus | | |
| | 10% | | 5% | | |
| | 20% | | ? = 10% | | |
| | A | B | C | D | Total |
| Wages | 80 | 78 | 72 | 69 | 299 |
| + 10% Bonus | 8 | 7.8 | 7.2 | 6.9 | 29.90 |
| Total wages | 88 | 85.8 | 79.2 | 75.9 | 328.9 |

Ans.5. Working notes :

1. Actual productive hours = 3,30,000
(Actual hours worked – Unproductive training hours)
(3,45,000 hrs. – 15,000 hrs.)
2. Sales per productive hour (₹) = 20
(Total Sales / Actual productive hours)
(₹ 66,00,000 / 3,30,000 hrs.)
3. Potential productive hours lost = 75,000
4. Sales foregone (₹) = 15,00,000
(75,000 hours × ₹ 20)
5. Contribution foregone (₹) = 3,00,000
(P/V ratio × Sales foregone)
(20% × ₹ 15,00,000)

**Statement of Profit foregone
as a result of labour turnover of M/s. Sunshine Ltd.**

| | |
|--|----------|
| | ₹ |
| Contribution foregone (Refer to working note 5) | 3,00,000 |
| Settlement cost due to leaving | 27,420 |
| Recruitment costs | 18,725 |
| Selection costs | 12,750 |
| Training costs | 16,105 |
| Total profit foregone | 3,75,000 |