

Disadvantages

- a) It does not help in producing quality output as the workers are concentrated more on quantity instead of quality.
- b) It does not help for a uniform flow of production and makes difficult to regulate the production schedule.
- c) It creates greater chances of ineffective use of materials, tools and equipment due to more concentration on increasing output.
- d) It requires extra supervision cost for quality output and effective use of materials, tools and equipment.

Homework Problems

Price Rate System

HW-1

Here,

Wages for each piece of Table = Rs 250

Wages for each piece of chair = Rs 125

$$\therefore \text{Wages paid earned from 12 tables} = \text{Rs } 250 \times 12 \\ = \text{Rs } 3,000$$

$$\therefore \text{Wages earned from 8 chairs} = \text{Rs } 125 \times 8 \\ = \text{Rs } 1,000$$

$$\text{Total wages} = \text{Rs } 3,000 + \text{Rs } 1,000 = \text{Rs } 4,000$$

$$\therefore \text{Total wages earned by Mr. Adhikari for the month is} \\ \text{Rs } 4,000$$

HW-2

Here;

Wage rate per unit of production = Rs. 5

Quantity produced by Gita = 1000 units

Quantity produced by Rita = 1500 units

$$\begin{aligned}\therefore \text{Wages earned by Gita} &= \text{Quantity} \times \text{Rate} \\ &= 1000 \times 5 \\ &= \text{Rs } 5,000\end{aligned}$$

$$\begin{aligned}\therefore \text{Wages earned by Rita} &= \text{Quantity} \times \text{Rate} \\ &= 1500 \times 5 \\ &= \text{Rs } 7,500\end{aligned}$$

HW-3

Done at the last page

Here;

Wage rate per hour = Rs. 15

Output per hour = 3 units

Quantity produced by Ramesh = 400 units

Quantity produced by Ganesh = 600 units

$$\begin{aligned}\therefore \text{Time taken by Ramesh to produce 400 units} &= \\ \frac{400}{3} &= 133.3333 \text{ hours}\end{aligned}$$

$$\begin{aligned}\therefore \text{Time taken by Ganesh to produce 600 units} &= \\ \frac{600}{3} &= 200 \text{ hours.}\end{aligned}$$

Now,

$$\begin{aligned}\therefore \text{Wages payable to Ramesh} &= 133.3333 \times 15 \\ &= \text{Rs } 2,000\end{aligned}$$

HW-4

Done at the last page no (78)

Here,

Normal rate per hour = Rs 20

Required time per unit = 30 minutes

Units produced by Mr. X = 500 units

Units produced by Mr. Y = 800 units

Since, 30 minutes is required to produce 1 unit. So,
units produced in 1 hour = 2 units.

Time taken by Mr. X to produce 500 units = $\frac{500}{2}$
= 250 hours

Time taken by Mr. Y to produce 800 units = $\frac{800}{2}$
= 400 hours

Now,

\therefore Wages earned by Mr. X = 250×20
= Rs 5,000

\therefore Wages earned by Mr. Y = 400×20
= Rs 8,000

HW-5

Here,

Standard time required per unit = 2 hours

Units produced by Radha = 200 hours = $\frac{200}{2}$ = 100 unitsUnits produced by Krishna = 400 hours = $\frac{400}{2}$ = 200 units

Wage rate per unit = Rs 10

Now,

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$$\begin{aligned}\text{Wages payable to Radha} &= \text{Units produced} \times \text{Wage Rate} \\ &= 100 \times 10 \\ &= \text{Rs. } 1000\end{aligned}$$

$$\begin{aligned}\text{Wages Payable to Krishna} &= \text{Units produced} \times \text{Wage Rate} \\ &= 200 \times 10 \\ &= \text{Rs } 2000\end{aligned}$$

Time Rate system

HW-6

Here;

Time worked by Rabin = 1,500 hours

Wage rate per hour = Rs. 15

$$\begin{aligned}\therefore \text{Wages earned by Rabin} &= \text{Time worked} \times \text{Rate} \\ &= 1500 \times 15 \\ &= \text{Rs } 22,500\end{aligned}$$

HW-7

Here;

Time worked by Dina = 500 hours

Time worked by Dipa = 600 hours

Wage rate per hour = Rs 16

Now,

$$\begin{aligned}\text{Wages earned by Dina} &= \text{Time worked} \times \text{Rate} \\ &= 500 \times 16 \\ &= \text{Rs. } 8,000\end{aligned}$$

$$\begin{aligned}\text{Wages earned by Dipa} &= \text{Time worked} \times \text{Rate} \\ &= 600 \times 16 \\ &= \text{Rs } 9,600\end{aligned}$$

HW-8

Here;

Standard Time required per unit = 5 hours

wages rate per hour = Rs 30

Output produced by Sita = 600 units

Output produced by Himal = 800 units

Now,

$$\begin{aligned} \text{Time worked by Sita} &= \text{Output} \times \text{Standard time required} \\ &= 600 \times 5 \\ &= 3000 \text{ hours} \end{aligned}$$

$$\begin{aligned} \text{Time worked by Himal} &= \text{Output} \times \text{Standard time required} \\ &= 800 \times 5 \\ &= 4000 \end{aligned}$$

$$\begin{aligned} \therefore \text{Wages earned by Sita} &= \text{Time worked} \times \text{Rate} \\ &= 3000 \times 30 \\ &= \text{Rs. } 90,000 \end{aligned}$$

$$\begin{aligned} \therefore \text{Wages earned by Himal} &= \text{Time worked} \times \text{Rate} \\ &= 4000 \times 30 \\ &= \text{Rs. } 120,000 \end{aligned}$$

HW-9

Here,

Normal working hours of a worker per day = 8 hours

Normal working hours of a worker per week in 6 days =

$$8 \times 6 = 48 \text{ hours}$$

Time worked in a day = 12 hours

Total time worked in 6 days = $12 \times 6 = 72$ hours

Wage rate per hour = Rs. 150

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$$\text{Overtime worked} = 72 \text{ hours} - 48 \text{ hours} = 24 \text{ hours}$$

$$\begin{aligned} \text{Normal wages earned by the worker} &= 48 \times 150 \\ &= \text{Rs } 7200 \end{aligned}$$

$$\begin{aligned} \text{Overtime wage rate per hour} &= \text{Rs } 150 + 20\% \text{ of Rs } 150 \\ &= \text{Rs } 150 + \text{Rs } 30 \\ &= \text{Rs } 180 \end{aligned}$$

$$\begin{aligned} \text{Overtime wages earned by worker} &= 24 \times 180 \\ &= \text{Rs } 4320 \end{aligned}$$

$$\begin{aligned} \therefore \text{weekly wages earned by the worker} &= \text{Normal wages} \\ &+ \text{Overtime wages} \\ &= \text{Rs } 7200 + \text{Rs } 4320 \\ &= \text{Rs } \underline{11,520} \end{aligned}$$

HW-10

Here;

$$\text{Total wages earned in a week} = \text{Rs } 960$$

$$\text{Number of days worked in a week} = 6 \text{ days}$$

$$\text{Daily working hours} = 8 \text{ hours.}$$

$$\begin{aligned} \text{Total time worked} &= \text{Number of days} \times \text{Daily working hours} \\ &= 6 \times 8 \\ &= 48 \text{ hours} \end{aligned}$$

Now,

$$\begin{aligned} \text{wage rate} &= \frac{\text{Total wages}}{\text{Total time worked}} \\ &= \frac{960}{48} \\ &= \text{Rs } 20 \end{aligned}$$

HW-11

Here,

Daily working hours = 8 hours

No. of days worked in a month = 25 days

Wage rate per hour = Rs 20.

$$\begin{aligned} \therefore \text{Total time worked} &= \text{No. of days worked} \times \text{Daily working} \\ &\quad \text{hours} \\ &= 25 \times 8 \\ &= 200 \text{ hours} \end{aligned}$$

Now;

$$\begin{aligned} \therefore \text{Total wages earned} &= \text{Time worked} \times \text{Rate per hour} \\ &= 200 \times 20 \\ &= \text{Rs } 4000 \end{aligned}$$

HW-12

Here,

No. of days worked in a month = 25 days

Wage rate per hour = Rs 25

Total wages earned in a month = Rs 5,000

Now,

$$\begin{aligned} \text{Total time worked} &= \frac{\text{Total wages earned}}{\text{Wage rate per hour}} \\ &= \frac{5000}{25} \\ &= 200 \text{ hours.} \end{aligned}$$

$$\begin{aligned} \therefore \text{Daily working hours} &= \frac{\text{Total time worked}}{\text{No. of days worked}} \\ &= \frac{200}{25} \\ &= 8 \text{ hours} \end{aligned}$$

HW-13

Here;

$$\text{Total hours worked} = 10 + 8 + 9 + 11 + 10 + 5 \\ = 53 \text{ hours}$$

Normal working hour per day = 8 hour.

Normal working hour in 6 day = 48 hours.

Normal Rate = Rs 200

$$\text{Overtime Rate} = \text{Rs } 200 + 50\% \text{ of Rs } 200 \\ = \text{Rs } 300$$

Now,

$$\text{Normal wages earned by worker} = \text{Time} \times \text{Rate} \\ = 48 \times 200 \\ = \text{Rs } 9600$$

$$\text{Overtime wages earned by worker} = 5 \times 300 \\ = \text{Rs } 1500$$

\therefore To

HW-13

Here,

Normal working hour per day = 8 hours

Normal rate = Rs 200

Overtime rate = Normal + 50%.

$$\therefore \text{Wages earned on Sunday (10 hours)} = 200 \times 8 + \\ 2 \times 300 \quad 300 \times 2 \\ = 1600 + 600 \\ = \text{Rs } 2200$$

$$\begin{aligned} \text{Wages earned on Monday (8 hours)} &= 200 \times 8 \\ &= \text{Rs } 1600 \end{aligned}$$

$$\begin{aligned} \text{Wages earned on Tuesday (9 hours)} &= 200 \times 8 + 300 \times 1 \\ &= \text{Rs } 1600 + \text{Rs } 300 \\ &= \text{Rs } 1900 \end{aligned}$$

$$\begin{aligned} \text{Wages earned on Wednesday (11 hours)} &= 200 \times 8 + 300 \times 3 \\ &= \text{Rs } 1600 + \text{Rs } 900 \\ &= \text{Rs } 2,500 \end{aligned}$$

$$\begin{aligned} \text{Wages earned on Thursday (10 hours)} &= 200 \times 8 + 300 \times 2 \\ &= \text{Rs } 1600 + \text{Rs } 600 \\ &= \text{Rs } 2200 \end{aligned}$$

$$\begin{aligned} \text{Wages earned on Friday (5 hours)} &= 200 \times 5 \\ &= \text{Rs } 1000 \end{aligned}$$

$$\begin{aligned} \therefore \text{Total wages earned} &= \text{Rs } 2200 + \text{Rs } 1600 + \text{Rs } 1900 + \\ &\text{Rs } 2500 + \text{Rs } 2200 + \text{Rs } 1000 \\ &= \text{Rs } 11,400 \end{aligned}$$

long process
but OK

MW-3

Here;

Output Units by Ramesh = 400 units

Output units by Ganesh = 600 units

wage rate per hour = Rs 15

output per hour = 3 units

$$\begin{aligned} \therefore \text{Wage rate per unit} &= \frac{\text{wage rate per hour}}{\text{Output unit}} \\ &= \frac{15}{3} \\ &= \text{Rs } 5 \end{aligned}$$

Under piece rate system,

$$\begin{aligned}\text{Wages payable to Ramesh} &= \text{Output units} \times \text{Wage Rate} \\ &= 400 \times 5 \\ &= \text{Rs } 2000\end{aligned}$$

$$\begin{aligned}\text{Wages payable to Ganesh} &= \text{Output units} \times \text{Wage Rate} \\ &= 600 \times 5 \\ &= \text{Rs } 3,000\end{aligned}$$

HW-4

Here,

$$\text{Normal rate per hour} = \text{Rs } 20$$

$$\text{Required time per unit} = 30 \text{ minutes.}$$

$$\text{Units produced by Mr X} = 500 \text{ units}$$

$$\text{Units produced by Mr Y} = 800 \text{ units.}$$

$$\therefore \text{Wage per unit} = \frac{\text{Wage rate per hour}}{\text{Output per units per hour.}}$$

$$\begin{aligned}&= \frac{20}{2} \\ &= \text{Rs } 10.\end{aligned}$$

Under piece rate system,

$$\begin{aligned}\text{Wages earned by Mr X} &= \text{Output units} \times \text{Wage Rate} \\ &= 500 \times 10 \\ &= \text{Rs } 5,000\end{aligned}$$

$$\begin{aligned}\text{Wages earned by Mr. Y} &= \text{Output units} \times \text{Wage Rate} \\ &= 800 \times 10 \\ &= \text{Rs } 8000\end{aligned}$$