Lead time is calculated from purchase order date to material received date
Maximum lead time = 21 days (15-12-2020 to 05-01-2021)
Minimum lead time = 14 days (30-12-2020 to 12-01-2021)

Calculations:
(i) Re-order level
= Maximum usage × Maximum lead time
= 4,500 units × 21 days = 94,500 units

(ii) Maximum stock level
= Re-order level + Re-order Quantity – (Min. Usage × Min. lead time)
= 94,500 units + 10,000 units – (1,500 units × 14 days)
= 1,04,500 units – 21,000 units = 83,500 units

(iii) Minimum stock level
= Re-order level – (Avg. consumption × Avg. lead time)
= 94,500 units – (3,000 units × 17.5 days)
= 94,500 units – 52,500 units
= 42,000 units

(iv) Store Ledger for the month of January 2021:

Date	Receipts				Issue				Balance		
	GRN/ MRN	Units	Rate (Rs.)	Amt. (Rs. '000)	GRN / MRN	Units	Rate (Rs.)	Amt. (Rs. '000)	Units	Rate (Rs.)	Amt. (Rs. '000)
01-01-21	-	-	-	-	-	-	-	-	3,500	9,810	34,335
05-01-21	008	10,000	9,930	99,300	003	500	9,930	4,965	13,000	9,898	1,28,670
06-01-21	-	-	-	-	011	3,000	9,898	29,694	10,000	9,898	98,980
10-01-21	-	-	-	-	012	4,500	9,898	44,541	5,500	9,898	54,439
12-01-21	009	10,000	9,780	97,800	004	400	9,780	3,912	15,100	9,823	1,48,327
15-01-21	-	-	-	-	013	2,200	9,823	21,611	12,900	9,823	1,26,716
24-01-21	-	-	-	-	014	1,500	9,823	14,734	11,400	9,823	1,11,982
25-01-21	010	10,000	9,750	97,500	-	-	-	-	21,400	9,789	2,09,482
28-01-21	-	-	-	-	015	4,000	9,789	39,156	17,400	9,789	1,70,326
31-01-21	-	-	-	-	016	3,200	9,789	31,325	14,200	9,789	1,39,001

[Note: Decimal figures may be rounded-off to the nearest rupee value wherever required)
Value of stock as on 31 01-2021 ('000) = Rs. 1,39,001

(v) Value of components used during the month of January 2021:

Sum of material requisitions 011 to 016 ('000)

    = Rs. 29,694 + Rs. 44,541 + Rs. 21,611 + Rs. 14,734 + Rs. 39,156 + Rs. 31,325

    = Rs. 1,81,061

(vi) Inventory Turnover Ratio

$$= \frac{\text{Value of materials used}}{\text{Average stock value}}$$

$$= \frac{\text{Rs. } 1,81,061}{(\text{Rs. } 1,39,001 + 34,335)/2} = \frac{\text{Rs. } 1,81,061}{\text{Rs. } 86,668} = 2.09$$

QUESTION 9 (RTP Nov' 19)

HBL Limited produces product 'M' which has a quarterly demand of 20,000 units. Each product requires 3 kg. and 4 kg. of material X and Y respectively. Material X is supplied by a local supplier and can be procured at factory stores at any time, hence, no need to keep inventory for material X. The material Y is not locally available, it requires to be purchased from other states in a specially designed truck container with a capacity of 10 tons.

The cost and other information related with the materials are as follows:

Particulars	Material –X	Material – Y
Purchase price per kg. (excluding GST)	Rs. 140	Rs. 640
Rate of GST	18%	18%
Freight per trip (fixed, irrespective of quantity)	-	Rs. 28,000
Loss of materials in transit*	-	2%
Loss in process*	4%	5%

*On purchased quantity

Other information:
- The company has to pay 15% p.a. to bank for cash credit facility.
- Input credit is available on GST paid on materials.

Required:

(i)   CALCULATE cost per kg. of material X and Y.

(ii)   CALCULATE the Economic Order quantity for both the materials.

SOLUTION

Working Notes:

(a) Annual purchase quantity for material X and Y:

Annual demand for product — 20,000 units × 4 = 80,000 units

Particulars	Mat –X	Mat –Y
Quantity required for per unit of product M	3 kg.	4 kg.
Net quantity for materials required	2,40,000 kg.	3,20,000 kg.
Add: Loss in transit	-	6,881 kg.
Add: Loss in process	10,000 kg.	17,204 kg.
Purchase quantity	2,50,000 kg.	3,44,085 kg.

Note - Input credit on GST paid is available; hence, it will not be included in cost of material

(I) Calculation of cost per kg. of material X and Y:

Particulars	Mat - X	Mat - Y
Purchase quantity (WN : a)	2,50,000 kg.	3,44,085 kg.
Rate per kg.	Rs. 140	Rs. 640
Purchase price	Rs. 3,50,00,000	Rs. 22,02,14,400
Add: Freight	0	Rs. 9,80,000*
Total cost	Rs. 3,50,00,000	Rs. 22,11,94,400
Net Quantity	2,40,000 kg.	3,20,000 kg
Cost per kg.	Rs. 145.83	Rs. 691.23

No. of trucks = $\dfrac{3,44,085 kg.}{10 ton \times 1,000}$ = 34.40 trucks or 35 trucks

Therefore, total freight = 35 trucks × Rs.28,000 = Rs.9,80,000

(ii) Calculation of Economic Order Quantity (EOQ) for Mat.-X and Y:

$$EOQ = \sqrt{\dfrac{2 \times \text{Annual Requirement} \times \text{Order cost}}{\text{Carrying cost per unit p.a.}}}$$

Particulars	Mat - X	Mat - Y
Annual Requirement	2,50,000 kg.	3,44,085 kg.
Ordering cost	0	Rs. 28,000
Cost per unit	Rs. 145.83	Rs. 691.23
Carrying cost	15%	15%
Carrying cost per unit p.a.	0*	Rs. 103.68
EOQ	0	13,632.62 kg.

QUESTION 10

From the following details, Draw a plan of ABC selective control:

	Units	Unit Cost (Rs.)
1	7,000	5.00
2	24,000	3.00
3	1,500	10.00
4	600	22.00
5	38,000	1.50
6	40,000	0.50
7	60,000	0.20
8	3,000	3.50
9	300	8.00
10	29,000	0.40
11	11,500	7.10
12	4,100	6.20

SOLUTION

Statement of Total Cost and Ranking

Item	Units	% of Total Units	Unit Cost (Rs.)	Total Cost (Rs.)	% of Total Cost	Ranking
1	7,000	3.1963	5.00	35,000	9.8378	4
2	24,000	10.9589	3.00	72,000	20.2378	2
3	1,500	0.6849	10.00	15,000	4.2162	7
4	600	0.2740	22.00	13,200	3.7103	8
5	38,000	17.3516	1.50	57,000	16.0216	3
6	40,000	18.2648	0.50	20,000	5.6216	6
7	60,000	27.3973	0.20	12,000	3.3730	9
8	3,000	1.3699	3.50	10,500	2.9513	11
9	300	0.1370	8.00	2,400	0.6746	12
10	29,000	13.2420	0.40	11,600	3.2605	10
11	11,500	5.2512	7.10	81,650	22.9502	1
12	4,100	1.8721	6.20	25,420	7.1451	5
	2,19,000	100		3,55,770	100	

Basis for selective control (Assumed)

Rs.50,000 & above   --   'A' items

Rs.15,000 to 50000 --   'B' items

Below Rs.15,000   --   'C' items

On this basis, a plan of A B C selective control is given below:

Ranking	Item Nos.	% of Total units	Cost (Rs.)	% of Total Cost	Category
1	11	5.2512	81,650	22.9502	
2	2	10.9589	72,000	20.2378	
3	5	17.3516	57,000	16.0216	
Total	3	33.5617	2,10,650	59.2096	A
4	1	3.1963	35,000	9.8378	
5	12	1.8721	25,420	7.1451	
6	6	18.2648	20,000	5.6216	
7	3	0.6849	15,000	4.2162	
Total	4	24.0181	95,420	26.8207	B
8	4	0.2740	13,200	3.7103	
9	7	27.3973	12,000	3.3730	
10	10	13.2420	11,600	3.2605	
11	8	1.3699	10,500	2.9513	
12	9	0.1370	2,400	0.6746	
Total	5	42.4202	49,700	13.9697	C
Grand Total	12	100	3,55,770	100	

QUESTION 11 (Module)

CALCULATE the earnings of A and B from the following particulars for a month and allocate the employee cost to each job X, Y and Z:

	A	B
(i) Basic Wages (Rs.)	10,000	16,000
(ii) Dearness Allowance	50%	50%
(iii) Contribution to provident Fund (on basic wages)	8%	8%
(iv) Contribution to Employee's State Insurance (on basic wages)	2%	2%
(v) Overtime (Hours)	10	--

The normal working hours for the month are 200. Overtime is paid at double the total of normal wages and dearness allowance. Employer's contribution to state Insurance and Provident Fund are at equal rates with employee's contributions. The two workers were employed on jobs X, Y, and Z in the following proportions:

Jobs	X	Y	Z
Worker A	40%	30%	30%
Worker B	50%	20%	30%

Overtime was done on job Y.

SOLUTION

Statement showing Earnings of Workers A and B

	A (Rs.)	B (Rs.)
Basic wages	10,000	16,000
Dearness Allowance (50% of Basic Wages)	5,000	8,000
Overtime wages (Refer to Working Note 1)	1,500	--
Gross wages earned	16,500	24,000
Less: Contribution to Provident fund	(800)	(1,280)
Less: Contribution to ESI	(200)	(320)
Net wages earned	15,500	22,400

Statement of Employee Cost

	A (Rs.)	B (Rs.)
Gross wages (excluding overtime)	15,000	24,000
Add: Employer's contribution to PF	800	1,280
Add: Employer's contribution to ESI	200	320
Gross wages earned	16,000	25,600
Normal working hours	200	200
Ordinary wages rate per hour	80	128

Statement showing Allocation of Wages to Jobs

	Total Wages (Rs.)	Jobs X (Rs.)	Jobs Y(Rs.)	Jobs Z(Rs.)
Worker A:				
-Ordinary Wages (4:3:3)	16,000	6,400	4,800	4,800
-Overtime	1,500	--	1,500	--
Worker B:				
-Ordinary Wages (5:2:3)	25,600	12,800	5,120	7,680
	43,100	19,200	11,420	12,480

Working Notes

1. Normal Wages are considered as basic wages

$$\text{Over time} = \frac{2 \times (\text{Basic wage} + \text{DA}) \times 10 \text{ hours}}{200}$$

$$= 2 \times \left(\frac{\text{Rs. } 15,000}{200} \right) \times 10 \text{ hours} = \text{Rs. } 150 \times 10 \text{ hours} = \text{Rs. } 1,500$$

QUESTION 12

Corrs Consultancy Ltd. is engaged in BPO industry. One of its trainee executives in the Personnel department has calculated labour turnover rate 24.92% for the last year using Flux method.

Following is the some data provided by the Personnel department for the last year:

Employees	At the beginning	Joined	Left	At the end
Data Processors	540	1,080	60	1,560
Payroll Processors	?	20	60	40
Supervisors	?	60	---	?
Voice Agents	?	20	20	?
Assistant Managers	?	20	---	30
Senior Voice Agents	4	---	---	12
Senior Data Processors	8	---	---	34
Team Leaders	?	---	---	?

Employees transferred from the Subsidiary Company				
Senior Voice Agents	---	8	---	---
Senior Data processors	---	26	---	---
Employees transferred to the Subsidiary Company				
Team Leaders	---	---	60	---
Assistant Managers	---	---	10	---

At the beginning of the year there were total 772 employees on the payroll of the company. The opening strength of the Supervisors, Voice Agents and Assistant Managers were in the ratio of 3:3:2.

The company has decided to abandon the post of Team Leaders and consequently all the Team Leaders were transferred to the subsidiary company.

The company and its subsidiary are maintaining separate set of books of account and separate Personnel Department.

You are required to calculate:

(a) Labour Turnover rate using Replacement Method and Separation Method.

(b) Verify the Labour turnover rate calculated under Flux method by the trainee executive of the Corrs Consultancy Ltd.

SOLUTION

Working Notes:

(i) Calculation of no. of employees at the beginning and end of the year

	At the Beginning of the year	At the End of the year
Data Processor	540	1,560
Payroll Processors (Left- 60 + Closing- 40 – Joined- 20)	80	40
Supervisors*	30	90
Voice Agents*	30	30
Assistant Managers*	20	30
Senior Voice Agents	4	12
Senior Data Processor	8	34
Team Leaders	60	0
total	**772**	**1,796**

(*) At the beginning of the year:

Strength of Supervisors, Voice Agents and Asst. Managers

= [772 - {540+80+4+8+60} employees] or [772 – 692 = 80 employees]

  [{Supervisors- 80× 3/8 = 30, Voice Agents- 80× 3/8 = 30 &

  Asst. Managers – 80 × 2/8 = 20} employees]

At the end of the year:

[Supervisors – (Opening – 30 + 60 Joining) = 90

Voice Agents – (Opening – 30 + 20 Joined – 20 left) = 30]

(ii) No. of Employees Separated, recruited and Newly Replaced during the year

Particulars	Separations	New Recruitment	Replacement	Total Joining
Data Processors	60	1,020	60	1,080
Payroll Processor	60	--	20	20
Supervisors	--	60	--	60
Voice Agents	20	--	20	20
Assistant Managers	10	10	10	20
Sr. Voice Agents	--	8	--	8
Sr. Data Processors	--	26	--	26
Team Leaders	60	--	--	--
Total	210	1,124	110	1,234

(Since, Corrs Consultancy Ltd. and its subsidiary are maintaining separate Personnel Department, so transfer-in and transfer-out are treated as recruitment and separation respectively.)

(a) Calculation of Labour Turnover:

Replacement Method $= \dfrac{\text{No.of employees replaced during the year}}{\text{Average no. of employees on roll}} \times 100$

$= \dfrac{110}{(772+1,796)/2} \times 100 \qquad = \dfrac{100}{1,284} \times 100 \qquad = 8.57\%$

Separation Method $= \dfrac{\text{No.of employees separated during the year}}{\text{Average no.of employees on roll}} \times 100$

$= \dfrac{210}{1,284} \times 100 = 16.36\%$

(b) Labour turnover under Flux Method:

$= \dfrac{\text{No. of employees (Joined+Separated) during the year}}{\text{Average No.of employees on roll}} \times 10$

$= \dfrac{\text{No. of employees (Replaced+New recruited+Separated) during the year}}{\text{Average No.of employees on roll}} \times 100$

$= \dfrac{1,234 + 210}{1,284} \times 10 = 112.46\%$

Labour turnover calculated by the executive trainee of the Personnel department is incorrect as it has not taken the No. of new recruitment while calculating the labour turnover under Flux method.

QUESTION 13

The management of B. R. Ltd. is worried about their increasing employee turnover in the factory and before analyzing the causes and taking remedial steps; it wants to have an idea of the profit foregone as a result of employee turnover in the last year.

Last year sales amounted to Rs.83,03,300 and P/V ratio was 20 per cent. The total number of actual hours worked by the direct employee force was 4.45 lakhs. The actual direct employee hours included 30,000 hours attributable to training new recruits, out of which half of the hours were unproductive. As a result of the delays by the Personnel Department in filling vacancies due to employer turnover, 1,00,000 potentially productive hours (excluding unproductive training hours) were lost.

The costs incurred consequent on employee turnover revealed, on analysis, the following:

Settlement cost due to leaving	Rs. 43,820
Recruitment costs	Rs. 26,740
Selection costs	Rs. 12,750
Training costs	Rs. 30,490

Assuming that the potential production lost as a consequence of employee turnover could have been sold at prevailing prices, FIND the profit foregone last year on account of employee turnover.

SOLUTION

Working Notes:

(i) Computation of productive hours

Actual hours worked(given)	4,45,000
Less: Unproductive training hours	15,000
Actual productive hours	4,30,000

(ii) Productive hours lost:

Loss of potential productive hours + Unproductive training hours

=1,00,000 + 15,000 = 1,15,000 hours

(iii) Loss of contribution due to unproductive hours:

$$= \frac{\text{Sales value}}{\text{Actual productive hours}} \times \text{Total unproductive hours}$$

$$= \frac{\text{Rs. 83,03,300}}{4,30,000 \text{ hours}} \times 1,15,000 \text{ hours} = \text{Rs. 22,20,650}$$

Contribution lost for 1,15,000 hours = $\frac{\text{Rs. 22,20,650}}{100} \times 20$ = Rs. 4,44,130

Contribution of profit foregone on account of employer turnover

	(₹)
Contribution foregone (as calculated above)	4,44,130
Settlement cost due to leaving	43,820
Recruitment cost	26,740
Selection cost	12,750
Training cost	30,490
Profit foregone	5,57,930

QUESTION 14 (RTP May 19)

X Y Z Ltd. wants to ascertain the profit lost during the year 2021-22 due to increased labour turnover. For this purpose, they have given you the following information:

(1) Training period of the new recruits is 50,000 hours. During this period their productivity is 60% of the experienced workers. Time required by an experienced workers is 10 hours per unit.

(2) 20% of the output during training period was defective. Cost of rectification of a defective unit was Rs.25.

(3) Potential productive hours lost due to delay in recruitment were 1,00,000 hours.

(4) Selling price per unit is Rs. 180 and P/V ratio is 20%.

(5) Settlement cost of the workers leaving the organisation was Rs.1,83,480.

(6) Recruitment cost was Rs.1,56,340.

(7) Training cost was Rs.1,13,180.

You are required to calculate the profit lost by the company due to increased labour turnover during the year 2021-22.

SOLUTION

Output by experienced workers in 50,000 hours = $\dfrac{50,000}{10}$ = 5,000 units

Therefore, Output by new recruits = 60% of 5,000 = 3,000 units

Loss of output = 5,000 – 3,000 = 2,000 units

Output lost due to delay = $\dfrac{1,00,000(hrs)}{10}$ units = 10,000 units

Total loss of output = 10,000 + 2,000 = 12,000 units

Contribution per unit = 20% of 180 = Rs.36

Total contribution cost = 36 × 12,000 = Rs.4,32,000

Cost of repairing defective units = 3,000 × 0.2 × 25 = Rs.15,000

Profit forgone due to labour turnover

	(Rs.)
Loss of contribution	4,32,000
Cost of repairing defective units	15,000
Recruitment cost	1,56,340
Training cost	1,13,180
Settlement cost of workers leaving	1,83,480
Profit forgone in 2021-22	**9,00,000**

QUESTION 15

Two workmen, 'A' and 'B', produce the same product using the same material. Their normal wage rate is also the same. 'A' is paid bonus according to the Rowan system, while 'B' is paid bonus according to the Halsey system. The time allowed to make the product is 50 hours. 'A' takes 30 hours while 'B' takes 40 hours to complete the product. The factory overhead rate is Rs. 5 per man- hour actually worked. The factory cost for the product for 'A' is Rs. 3,490 and for 'B' it is Rs. 3,600.

Required:

(a) COMPUTE the normal rate of wages;

(b) COMPUTE the cost of materials cost;

(c) PREPARE a statement comparing the factory cost of the products as made by the two workmen.

SOLUTION

Step 1 : Let X be the cost of material and Y be the normal rate of wages per hour.

Step 2 : Factory Cost of Workman 'A'

	(Rs.)
A. Material Cost	X
B. Wages (Rowan Plan)	30 Y
C. Bonus $=\dfrac{30}{50}$ x(50-30) x Y	12 Y
D. Overheads (30x 5)	150
E. Factory Cost	3,490
Or, X +42 Y = Rs.3,490(Given)-Rs.150= Rs.3,340.............................equation (i)	

Step 3: Factory Cost of Workman 'B'

	(Rs.)
A. Material cost	X
B. Wages (Halsey Plan)	40 Y
C. Bonus =50% of (SH-AH) X R =50% of (50-40) X R	5 Y
D. Overheads (40 x Rs.5)	200
E. Factory Cost	3,600
Or, X + 45 Y = Rs.3,600(Given) - Rs.200 =Rs. 3,400.......................equation(ii)	

Step 4: Subtracting equation (i) from equation (ii)

$$3Y = Rs. 60$$
$$Y = Rs. 60/3 = Rs. 20 \text{ per hour.}$$

(a) The normal rate of wages: Rs. 20 per hour

(b) The cost of material: X + 45 Rs. 20 = Rs. 3,400 or, X = Rs. 3,400 - Rs. 900 = Rs. 2,500

(C) Comparative Statement of the Factory Cost of the product made by the two workmen.

	'A'(Rs.)	'B'(Rs.)
Material cost	2,500	2,500
Direct Wages	600	800
	(30x Rs. 20)	(40x Rs. 20)
Bonus	240	100
	(12x Rs. 20)	(5x Rs.20)
Factory Overhead	150	200
Factory Cost	**3,490**	**3,600**

QUESTION 16

The standard hours of job X is 100 hours. The job has been completed by Amar in 60 hours, Akbar in 70 hours and Anthony in 95 hours.
The bonus system applicable to the job is as follows:-

Percentage of time saved to time allowed (Slab rate)	Bonus
Saving upto 10%	*10% of time saved*
From 11% to 20%	*15% of time saved*
From 21% to 40%	*20% of time saved*
From 41% to 100%	*25% of time saved*

The rate of pay is Rs.1 per hour, Calculate the total earnings of each worker and also the rate of earnings per hour.

SOLUTION

Statement of total earnings and rate of earnings per hour

	Workers		
	Amar	Akbar	Anthony
Standard hours of Job	100 hours	100 hours	100 hours
Time taken on the Jobs (i)	60 hours	70 hours	95 hours
Time Saved	40 hours	30 hours	5 hours
Percentage of time same saved to time allowed	40%	30%	5%
Bonus hours (ii) (See Working Note 1)	6.5 hours	4.5 hours	0.5 hours
Total hours to be paid [(i) + (ii)]	66.5 hours	74.5 hours	95.5 hours
Total earning @ Re. 1 per hour	Rs. 66.5	Rs.74.5	Rs.95.5
Rate of earning per hour (See Working Note 2)	Rs. 1.1083	Rs. 1.0642	Rs. 1.005

Note:

1. Bonus hours as percentage of time saved:

   Amar: (10 hours × 10%) + (10 hours × 15%) + (20 hours × 20%) = 6.5 hours
   Akbar: (10 hours × 10%) + (10 hours × 15%) + (10 hours × 20%) = 4.5 hours
   Anthony: 5 hours × 10%   = 0.5 hours

2. Rate of Earning per hour = $\dfrac{\text{Total earning}}{\text{Total time taken on job}}$

   Amar   = $\dfrac{\text{Rs. 66.5}}{\text{60 Hours}}$ = Rs. 1.1083

   Akbar   = $\dfrac{\text{Rs. 74.5}}{\text{70 Hours}}$ = Rs. 1.0642

   Akbar   = $\dfrac{\text{Rs. 95.50}}{\text{95 Hours}}$ = Rs. 1.005

QUESTION 17 (Similar to RTP May 21)

Jigyasa Boutiques LLP. (JBL) takes contract on job work basis. It works for various fashion houses and retail stores. It has employed 26 workers and pays them on time rate basis. On an average an employee is allowed 2 hours for boutique work on a piece of garment. In the month of March 2021, two workers Margaret and Jennifer were given 30 pieces and 42 pieces of garments respectively for boutique work. The following are the details of their work:

	Margaret	Jennifer
Work assigned	30 pcs.	42 pcs.
Time Taken	28 hours	40 hours

Workers are paid bonus as per Halsey System. The existing rate of wages is Rs. 50 per hour. As per the new wages agreement the worker will be paid Rs.55 per hour w.e.f. 1st April 2021. At the end of the month March 2021, the accountant of the company has calculated wages to these two workers taking Rs. 55 per hour.

(i) From the above information calculate the amount of loss that the company has incurred due to incorrect rate selection.

(ii) What would be the loss incurred by the JBL due to incorrect rate selection if it had followed Rowan scheme of bonus payment.

(iii) Amount that could have been saved if Rowan scheme of bonus payment was followed.

(iv) Do you think Rowan scheme of bonus payment is suitable for JBL?

SOLUTION

	Margaret	Jennifer
No. of garments assigned (Pieces)	30	42
Hours allowed per piece (Hours)	2	2
Total hours allowed (Hours)	60	84
Hours Taken (Hours)	28	40
Hours Saved (Hours)	32	44

(i) Calculation of loss incurred due to incorrect rate selection.
(while calculating loss only excess rate per hour has been taken)

	Margaret (Rs.)	Jennifer (Rs.)	Total (Rs.)
Basic Wages	140 (28 Hrs. × Rs. 5)	200 (40 Hrs. × Rs. 5)	340
Bonus (as per Halsey Scheme) (50% of Time Saved × Excess Rate)	80 (50% of 32 Hrs. × Rs.5)	110 (50% of 44 Hrs. × Rs.5)	190
Excess Wages Paid	220	310	530

(ii) Amount of loss if Rowan scheme of bonus payment were followed

	Margaret (Rs.)	Jennifer (Rs.)	Total (Rs.)
Basic Wages	140.00 (28 Hrs. × Rs.5)	200.00 (40 Hrs. × Rs.5)	340.00
Bonus (as per Rowan Scheme) $\dfrac{\text{Time taken} \times \text{Time Saved} \times \text{Excess rate}}{\text{Time Allowed}}$	74.67 $\dfrac{28 \times 32 \times \text{Rs.5}}{60}$	104.76 $\dfrac{40 \times 44 \times \text{Rs.5}}{84}$	179.43
Excess Wages Paid	214.67	304.76	519.43

(iii) Calculation of amount that could have been saved if Rowan Scheme were followed

	Margaret (Rs.)	Jennifer (Rs.)	Total (Rs.)
Wages paid under Halsey System	220.00	310.00	530.00
Wages paid under Rowan Scheme	214.67	304.76	519.43
Difference (Savings)	5.33	5.24	10.57

(iv) Rowan scheme of incentive payment has the following benefits, which is suitable with the nature of business in which Jigyasa Boutique LLP operates:

(a) Under Rowan Scheme of bonus payment, workers cannot increase their earning or bonus by merely increasing its work speed. Bonus under Rowan Scheme is maximum when the time taken by a worker on a job is half of the time allowed. As this fact is known to the workers, therefore, they work at such a speed which helps them to maintain the quality of output too.

(b) If the rate setting department commits any mistake in setting standards for time to be taken to complete the works, the loss incurred will be relatively low.