

1. Solution:

Particulars	Straight	Taylor system	Mericks
X 140	140 X 1.5 = Rs.10	80% X 1.5 = 1.2 140 X 1.2 = Rs.168	110% X 1.5 = 1.65 140 X 1.65 = Rs.231
Y 165	165 X 1.5 = Rs.247.5	120% X 1.5 = 1.8 165 X 1.8 = Rs.297	120% X 1.5 = 1.8 165 X 1.8 = Rs.297

2. Solution:

Computation of factory cost under three systems: Amount (Rs.)

	Time Rate System	Halsey Plan	Rowan Plan
Material	4.00	4.00	4.00
Labour (working notes)	2.25	1.88	2.00
Overheads (150% of total direct wages)	3.38	2.82	3.00
Factory Cost	9.63	8.70	9.00

Working Notes: Amount (Rs.)

	Time Rate System	Halsey Plan	Rowan Plan
Labour	9 x 0.25	6 x 0.25 + 1/2 (9-6) x 0.25	6 x 0.25 + (9-6 / 9) x 6 x 0.25
	2.25	1.88	2.00

3.

Solution:

Calculation of wages under Time Rate System

Earnings under time wages = TR
= 48 x 1.8 = **Rs. 86.4**

Calculation of wages under Piece Rate with a Guaranteed Wage Rate

Normal Time for one unit = 20 minutes
(+) Relaxation allowance @ 25% = 5 minutes
Standard Time = 25 minutes
No. of pieces per hour = 60/25 pieces.
Piece Rate = Hourly Rate / No. of pieces per hour
= 1.8 ÷ (60/25)
= 0.75

Earnings under Piece Rate = 180 x 0.75 = **Rs. 135**

Calculation of wages under Halsey Premium Bonus

Standard time for actual production = 180 x 25 / 60 = 75 hours
Earnings under Halsey Plan =
= (48 x 1.8) + 50/100 (75-48) x 1.8
= 86.4 + 24.3 = **Rs. 110.70**

Calculation of wages under Rowan Premium Bonus

Standard time for actual production = 180 x 25 / 60 = 75 hours
Earnings under Rowan Plan = (48 x 1.8) + (75-48 / 75) x (48 x 1.8)

$$= 86.4 + 31.104 = \text{Rs. } 117.50$$

4. Solution :

Particulars	2008	CPU	2009	CPU
Quantity	10,000		15,000	
Raw material consumed	2,50,000	25	3,75,000	25
+Direct wages	1,50,000	15	2,25,000	15
+direct expense	-	-	-	-
Prime cost	4,00,000		6,00,000	
+Factory overheads				
Fixed cost	1,00,000		1,20,000	
Variable	2,00,000	20	3,30,000	22
+Administration overheads	1,00,000		1,20,000	
Cost of production	8,00,000		11,70,000	
+Selling and distribution				
Fixed	60,000		72,000	
Variable	90,000	9	1,48,500	9.9
Total cost	9,50,000		13,90,500	
+profit	2,50,000		4,09,500	
Sales	12,00,000	120	18,00,000	120

5. Solution:

Particulars	31-12-2008	CPU	31-12-2009	CPU
Quantity sold	2500		3000	
Raw material consumed	75,000	3	94,000	33
+direct wages	30,000	12	45,000	15
+direct expense	25,000	10	30,000	
Prime cost	1,30,000		1,74,000	
+Factory overheads	40,000	16	60,000	
Work cost	1,70,000		2,34,000	
+Administration overheads				
Office salary	25,000		25,000	
Office rent	12,000		6,000	
Cost of production	2,07,000		2,65,000	
+Selling & distribution overheads	12,500	5	15,000	5
Total cost	2,19,500		2,80,000	
+profit	30,500		70,000	
Sales	2,50,000		3,50,000	

6. Solution:

Particulars	June to July	CPU	August to December	CPU
Raw material consumed	7,00,000	20	10,00,000	20
+direct wages	4,20,000	12	6,00,000	12
+direct expense	70,000	2	1,00,000	2
Prime cost	11,90,000		17,00,000	
+Overheads				
Fixed	1,75,000		1,25,000	
Variable	5,60,000	16	8,00,000	16
Semi variable	52,500		62,500	
Total cost	19,77,500		26,87,500	
+ Profit	4,37,500		3,62,500	
Sales	24,15,000	69	30,50,000	61

7.

Swadeshi electronics Ltd.
Cost sheet for the year ended 31st march 2007

Particulars	Total cost	Per unit	Total cost	Per unit
Direct materials	3,30,000	22	3,96,000	19.8
Direct wages	2,70,000	18	2,88,000	14.4
Prime cost	6,00,000	40	6,84,000	34.2
Factory overheads	2,25,000	15	2,85,000	14.25
Works cost	8,25,000	55	9,69,000	48.45
Administrative overheads	1,05,000	07	63,000	3.15
Cost of production	9,30,000	62	10,32,000	51.6
Sales overheads	90,000	6	1,20,000	6
Cost of sales	10,20,000	68	11,52,000	57.6
Profit	2,55,000	17	2,08,000	10.4
Sales	12,75,000	85	13,60,000	68