J.K. SHAH TEST SERIES

Evaluate Learn Succeed

SUGGESTED SOLUTION

IPCC May 2017 EXAM

COSTING

Test Code - I NJ 7444

Answer-1 :

Contract Account

Particulars	Amount Rs.	Amount Rs.	Particulars	Amount Rs.	Amount Rs.
To Materials		25,26,000	By material at site		50,000
To Direct wages	13,28,000		By Work in progress:		
Add: outstanding	2,24,000	15,52,000	- Work certified	1,00,00,000	
To Site expenses		9,60,000	- Work uncertified	12,00,000	1,12,00,000
To Office expenses		6,26,000			
To Postage and Stationery		29,600			
To Rates and taxes	25,600				
Less: Advance	(1,400)	24,200			
To Fuel and power		8,46,000			
To Depreciation*		9,80,300			
To Notional profit c/d		37,05,900			
		1,12,50,000			**1,12,50,000**

* Depreciation

(5 Marks)

(i)	On Machinery = {10% on (Rs.36,00,000 × 0.8)}	= Rs.2,88,000
(ii)	On Vehicles = 20% on Rs.32,20,000	= Rs.6,44,000
(iii)	On Furniture = 15% on Rs.3,22,000	= Rs.48,300
		= Rs.9,80,300

(1 Mark)

Answer-2 :

Total hours 60 workers x 40 = 2400 hours

Output = 8 units per hour

Hours required = $\dfrac{(2400 \times 8)}{8 \text{ hours}} = \dfrac{19,200 \text{ units}}{8 \text{ hours}} = 2400$ hours

Standard hours allowed = $\dfrac{19,200 \text{ units}}{6 \text{ hours}} = 3,200$ hours

Time Saved = 3200 - 2400 = 800 hours

Rate per hour = $\dfrac{\text{Rs.400}}{40 \text{ hours}}$ =Rs.10

(3 Marks)

Bonus

Halsey Scheme	=	50% of Time Saved
Bonus	=	50% of Time Saved
	=	$\dfrac{800}{2}$ = 400 hrs. x Rs. 10 = Rs. 4000

Rowan Scheme

Bonus	=	$\dfrac{\text{Time Saved}}{\text{Std. Hours}}$ x Actual Hours x Hourly Rate
	=	$\dfrac{800 \text{ hours}}{3200 \text{ hours}}$ x 2400 hrs. x 10 = Rs. 6000

(2 Marks)

Comparative Statement

Particulars	Present Rs.	Halsey Rs.	Rowan Rs.
Sales 19200 units x Rs. 11	2,11,200	2,11,200	2,11,200
Direct Materials	1,53,600	1,53,600	1,53,600
(19200 units x Rs. 8)			
$\left[\dfrac{19,200 \text{ units}}{6} = \dfrac{3200 \text{ hours x Rs.10}}{2400 \text{ hours x Rs.10}}\right]$	32,000	24,000	24,000
Overtime 800 hrs. x Rs. 5	4,000		
Bonus	—	4,000	6.000
Variable overheads	1,600	1,200	1,200
(3200 hrs x Rs. 0.50			
2400 hrs x Rs. 0.50)			
Fixed Overheads	9,000	9,000	9,000
	2,00,200	1,91,800	1,93,800
Profit	11,000	19,400	17,400

(3 Marks)

Answer-3 :
Preparation of Monthly Cash Budget

Cash Budget for four months from June, 2014 to September, 2014

Particulars	June (Rs.)	July (Rs.)	August (Rs.)	September (Rs.)
Opening Balance	45,000	45,500	45,500	45,000
Receipts:				
Cash Sales	1,00,000	98,000	1,08,000	1,22,000
Collection from debtors	3,48,000	3,80,000	3,96,000	4,12,000
Dividends	25,000	-	-	-
Total (A)	**5,18,000**	**5,23,500**	**5,49,500**	**5,79,000**
Payments:				
Creditors for Materials	2,00,000	2,10,000	2,60,000	2,82,000
Wages	1,62,500	1,65,000	1,65,000	1,67,500
Overheads	40,000	38,000	37,500	60,800
Installment for Machine	-	20,000	20,000	20,000
Interest on Debentures	30,000	-	-	-
Advance Tax	-	-	15,000	-
Total (B)	**4,32,500**	**4,33,000**	**4,97,500**	**5,30,300**
Surplus (A – B)	85,500	90,500	52,000	48,700
Fixed Deposits	40,000	45,000	7,000	3,000
Closing Balance	45,500	45,500	45,000	45,700

(7 Marks)

Working Notes:

(1)   Cash Sales and Collection from Debtors:

Month	Total	Cash	Credit	Collection from Debtors

	Sales (Rs.)	Sales (Rs.)	Sales (Rs.)	June (Rs.)	July (Rs.)	August (Rs.)	September (Rs.)
April, 2010	4,20,000	84,000	3,36,000	1,68,000	-	-	-
May, 2010	4,50,000	90,000	3,60,000	1,80,000	1,80,000	-	-
June, 2010	5,00,000	1,00,000	4,00,000	-	2,00,000	2,00,000	-
July, 2010	4,90,000	98,000	3,92,000	-	-	1,96,000	1,96,000
Aug., 2010	5,40,000	1,08,000	4,32,000	-	-	-	2,16,000
Sept.,2010	6,10,000	1,22,000	4,88,000	-	-	-	-
			Total	**3,48,000**	**3,80,000**	**3,96,000**	**4,12,000**

(2 Marks)

(2)   Payment of Wages

June = 80,000 + 82,500 = 1,62,500;

July = 82,500 + 82,500 = 1,65,000;

Aug. = 82,500 + 82,500 = 1,65,000; and

Sept.= 82,500 + 85,000 = 1,67,500.

(Note: It has been assumed that the company wants to keep minimum cash balance ofRs.45,000.)

(1 Mark)

Answer-4 :

(a)   Production Budget (in units)

	Product- K (units)	Product- H (units)
Expected sales	8,000	4,200
Add: Closing stock	1,000	2,100
Less: Opening stock	(800)	(1,600)
Units to be produced	8,200	4,700

(3 Marks)

(b) Material Purchase Budget

	Material-X (kg.)	Material-Y (kg.)	Material-Z (ltr.)
Materials required:			
- Product-K	98,400	1,23,000	65,600
	(8,200 units ×12 kg.)	(8,200 units×15 kg.)	(8,200 units× 8 ltr.)
- Product- H	70,500	28,200	65,800
	(4,700 units ×15 kg.)	(4,700 units × 6 kg.)	(4,700 units×14ltr.)
Total	1,68,900	1,51,200	1,31,400
Add: Closing stock	30,000	18,000	7,500
Less: Opening stock	(25,000)	(30,000)	(14,000)
Quantity to bepurchased	1,73,900	1,39,200	1,24,900
Rate	Rs.15 per kg.	Rs.16 per kg.	Rs.5 per ltr.
Purchase cost	Rs. 26,08,500	Rs. 22,27,200	Rs. 6,24,500

(4 Marks)

(c) Direct Labour Budget

	Unskilled (hours)	Skilled (hours)

For Product K	98,400	65,600
	(8,200 units × 12 hours)	(8,200 units × 8 hours)
For Product H	47,000	23,500
	(4,700 units × 10 hours)	(4,700 units × 5 hours)
Labour hours required	1,45,400	89,100
Rate	Rs. 40 per hour	Rs. 75 per hour
Wages to be paid	Rs. 58,16,000	Rs. 66,82,500

(3 Marks)

Answer-5 :

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

Worker	Actual hours worked (Hours)	Hourly wage rate (Rs.)	Wages (Rs.)
I	380	40	15,200
II	100	50	5,000
III	540	60	32,400

(2 Marks)

(ii)   Computation of Wages of each worker under piece work earning basis

Product	Piece rate Per unit (Rs.)	Worker-I Units	Worker-I Wage (Rs.)	Worker-II Units	Worker-II Wage (Rs.)	Worker-III Units	Worker-III Wages (Rs)
A	15	210	3,150	-	-	600	9,000
B	20	360	7,200	-	-	1,350	27,000
C	30	460	13,800	250	7,500	-	-
Total			**24,150**		**7,500**		**36,000**

(2 Marks)

Since each worker's earnings are more than 50% of basic pay. Therefore, worker-I, II and III will be paid the wages as computed i.e. Rs. 24,150, Rs. 7,500 and Rs. 36,000respectively.

Working Notes:

1.   Piece rate per unit

Product	Standard time per unit in minute	Piece rate each minute (Rs.)	Piece rate per unit (Rs.)
A	15	1	15
B	20	1	20
C	30	1	30

(2 Marks)

2.   Time allowed to each worker

Worker	Product-A	Product-B	Product-C	Total Time (Hours)
I	210 units ×15 = 3,150	360 units × 20 = 7,200	460 units × 30 = 13,800	24,150/60 = 402.50
II	-	-	250 units × 30 = 7,500	7,500/60 = 125
III	600 units ×15 = 9,000	1, 350 units ×20 = 27,000	-	36,000/60 = 600

(2 Marks)

(iii) Computation of wages of each worker under Premium bonus basis (where eachworker receives bonus based on Rowan Scheme)

Worker	Time Allowed (Hr.)	Time Taken (Hr.)	Time saved (Hr.)	Wage Rate per hour (Rs.)	Earning Rs.	Bonus Rs.*	Total Earning Rs.
I	402.5	380	22.5	40	15,200	850	16,050
II	125	100	25	50	5,000	1,000	6,000
III	600	540	60	60	32,400	3,240	35,640

(2 Marks)

* $\dfrac{\text{Time Taken}}{\text{Time Allowed}}$ x Time Saved x Wage Rate

Worker-I = $\dfrac{380}{402.5}$ x 22.5 x 40 = 850

Worker-II = $\dfrac{100}{125}$ x 25 x 50 = 1,000

Worker-III = $\dfrac{540}{600}$ x 60 x 60 = 3,240 **(2 Marks)**

Answer-6 :

The current value of equity share of D Ltd. is sum of the following:

(i)   Presently value (PV) of dividends payments during 1-4 years; and

(ii)   Present value (PV) of expected market price at the end of the fourth year based on constant growth rate of 8 per cent.

PV of dividends – year 1-4

Year	Dividend	PV factor at 16%	Total PV (in Rs.)
1	1.50(1 + 0.12)=1.68	0.862	1.45
2	1.68 (1+0.12)= 1.88	0.743	1.40
3	1.88 (1 + 0.10)=2.07	0.641	1.33
4	2.07 (1 + 0.10)= 2.28	0.552	1.26
	Total		**5.44**

Present value of the market price (P 4): end of the fourth year –

$P_4 = D_5 / (K_e - g)$ = Rs. 2.28 (1.08) / (16% - 8%)   = Rs. 30.78

PV of Rs. 30.78 = Rs. 30.78 x 0.552   = Rs. 16.99

Hence, Value of equity shares Rs. 5.44 + Rs. 16.99   = Rs. 22.43

(4 Marks