IPCC – November 2017

COSTING

Test Code – 80101
Branch (MULTIPLE) (Date : 17.09.2017)
(50 Marks)

Note: All questions are compulsory.

Question 1 (8 marks)

(A) Costing books

Stores Control Account (1 mark)

Particulars	(`)	Particulars	(`)
To Balance b/d	32,000	By W.I.P. Control A/c	1,60,000
To General ledger adjustment A/c	1,58,000	By Work overhead control A/c	20,000
To Work in progress control A/c	80,000	By Costing Profit and Loss A/c	6,000
		By Balance c/d	84,000
	2,70,000		2,70,000

W.I.P. Control Account (1 mark)

Particulars	(`)	Particulars	(`)
To Balance b/d	60,000	By Stores control A/c	80,000
To Stores control A/c	1,60,000	By Costing profit and loss A/c (Cost of sales)	4,00,000
To Direct wages control A/c	65,000		
To Works overhead control A/c	2,40,000	By Balance c/d	45,000
	5,25,000		5,25,000

Works Overhead Control Account (1 mark)

Particulars	(`)	Particulars	(`)
To General ledger adjustment A/c	2,50,000	By W.I.P. Control A/c	2,40,000
To Store ledger control A/c	20,000	By Costing profit & loss A/c (under recovery)	30,000
	2,70,000		2,70,000

Costing Profit & Loss Account (1 mark)

Particulars	(`)	Particulars		(`)
To W.I.P. control A/c (Cost of sales)	4,00,000	By General ledger adjustment A/c		
To Works overhead control A/c	30,000	Cost of sales	4,00,000	
To Stores control A/c (shortage)	6,000	10% profit	40,000	4,40,000
To Profit	4,000			
	4,40,000			4,40,000

(B) Financial Books

Profit & Loss Account (2 marks)

Particulars		(`)	Particulars		(`)
To Opening stock			By Sales		4,40,000
Stores	32,000		By Closing stock:		
W.I.P.	60,000	92,000	Stores	84,000	
			W.I.P.	45,000	1,29,000
To Purchases		1,58,000	By Income from investment		10,000
To Wages incurred		70,000	By Loss		11,000
To Overheads incurred		2,50,000			
To Loss on sale of capital assets		20,000			
		5,90,000			5,90,000

Reconciliation statement (2 marks)

	(`)	(`)
Profit as per Cost Accounts		4,000
Add: Income from investment recorded in Financial accounts		10,000
		14,000
Less: Under absorption of wages in Cost accounts	5,000	
Loss on sales of capital asset only included in Financial accounts	20,000	25,000
Loss as per Financial accounts		11,000

Question 2 (8 marks)

Total Fixed Cost = ₹6,00,000 + ₹20,00,000 + ₹8,00,000 + ₹2,00,000

= ₹36,00,000

Contribution per unit = ₹600 - ₹470 = ₹130

P/V Ratio $= \frac{\text{Contribution per unit}}{\text{Selling Price}} \times 100 = \frac{₹130}{₹600} \times 100 = 21.67\%$

Break-even Point $= \frac{\text{Total Fixed Cost}}{\text{Contribution per unit}} \times 100$ 4 marks

$= \frac{₹36,00,000}{₹130} = 27,692.31$ or 27,693 units

Break-even Sales $= \frac{\text{Total Fixed Cost}}{\text{P/V Ratio}} = \frac{₹36,00,000}{21.67\%} = ₹1,66,12,829$

Calculation of Profit/ (loss):

Total Contribution (₹130 × 35,000 units) = ₹45,50,000

Less: Fixed Cost = ₹36,00,000

Profit = ₹ 9,50,000

(ii) Revised Selling Price = ₹600 – 5% of ₹600 = ₹570

Revised Variable cost = ₹410

Revised Contribution = ₹570 – ₹410 = ₹160 2 marks

Break-even Point $= \frac{₹36,00,000 + ₹9,00,000}{₹160} = 28,125$ units

(iii) Revised Selling Price = ₹600 + 5% of ₹600 = ₹630

Revised Variable cost = ₹470 + ₹5 = ₹475

Revised Contribution = ₹630 – ₹475 = ₹155

Break-even Point $= \frac{₹36,00,000}{₹155} = 23,225.81$ or 23,226 units

2 marks

Question 3 (5 marks)

(1 mark each)

i) Selling Price per unit $= \frac{\text{Margin of Safety in Rupee value}}{\text{Margin of Safety in Quantity}}$

$= \frac{₹3,75,000}{15,000 \text{ units}} = ₹25$

(ii) Profit = Sales Value – Total Cost

= Selling price per unit × (BEP units + MoS units) – Total Cost

= ₹ 25 × (5,000 + 15,000) units – ₹ 3,87,500

= ₹ 5,00,000 – ₹ 3,87,500 = ₹ 1,12,500

(iii) Profit/ Volume (P/V) Ratio $= \frac{\text{Profit}}{\text{Margin of Safety in Rupee value}} \times 100$

1 mark

$$= \frac{`1,12,500}{`3,75,000} \times 100 = 30\%$$

(iv) Break Even Sales (in Rupees) = BEP units × Selling Price per unit

= 5,000 units × ` 25 = ` 1,25,000

(v) Fixed Cost = Contribution – Profit

= Sales Value × P/V Ratio – Profit

= (` 5,00,000 × 30%) – ` 1,12,500

= ` 1,50,000 – ` 1,12,500 = ` 37,500

Question 4 (8 marks)

Output by experienced workers in 50,000 hours = $\frac{50000}{10}$ = 5,000 units

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

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

Total loss of output = Due to delay recruitment + Due to inexperience

= 10,000 + 2,000 = 12,000 units

Contribution per unit = 20% of `360 = ` 72

Total contribution lost = `72 × 12,000 units = ` 8,64,000 (3 marks)

Cost of repairing defective units = 3,000 units × 0.2 × ` 25 = ` 15,000 (1 mark)

Profit forgone due to labour turnover (4 marks)

	(`)
Loss of Contribution	8,64,000
Cost of repairing defective units	15,000
Recruitment cost	3,12,680
Training cost	2,26,360
Settlement cost of workers leaving	3,66,960
Profit forgone in 2016-17	17,85,000

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Question5 (8 marks)

(a) (a) Statement Showing Cost Elements Equivalent Units of Performance and the Actual Cost per Equivalent Unit (1 Mark)

Detail of Returns	Detail of Input Units	Details	Equivalent Units				
			Output Units	Labour		Overheads	
				Units	%	Units	%
Returns in Process at Start	200	Returns Completed in March	900	900	100	900	100
Returns Started in March	825	Returns in Process at the end of March	125	100	80	100	80
	1,025		1,025	1,000		1,000	
Costs: (1 mark)					(`)		(`)
From previous month					12,000		5,000
During the month					1,78,000		90,000
Total Cost					1,90,000		95,000
Cost per Equivalent Unit					190.00		95.00

(a) Actual cost of returns in process on March 31: (1 mark)

	Numbers	Stage of Completion	Rate per Return (`)	Total (`)
Labour	125 returns	0.80	190.00	19,000
Overhead	125 returns	0.80	95.00	9,500
				28,500

(b) Standard Cost per Return: (1 mark)

Labour 5 Hrs × ` 40 per hour = ` 200 Overhead
5 Hrs × ` 20 per hour = ` 100
` 300

Budgeted volume for March = ` 98,000 / 1000 = 980 Returns

Actual labour rate = ` 178000 / 4000 = `44.50

(c) Computation of Variances:

Statement Showing Output (March only) Element Wise	Labour	Overhead
Actual performance in March in terms of equivalent units as Calculated above	1,000	1,000
Less: Returns in process at the beginning of March in terms of equivalent units i.e. 25% of returns (200)	50	50
	950	950

Variance Analysis:

a. Labour Rate Variance (1 mark)

= Actual Time × (Standard Rate – Actual Rate)

= Standard Rate × Actual Time – Actual Rate × Actual Time

= ` 40 × 4,000 hrs. – ` 1,78,000 = ` 18,000(A)

b. Labour Efficiency Variance(1 mark)

= Standard Rate × (Standard Time – Actual Time)

= Standard Rate × Standard Time – Standard Rate × Actual Time

= ` 40 × (950 units × 5 hrs.) – ` 40 × 4,000 hrs.

= ` 30,000(F)

c. Overhead Expenditure or Budgeted Variance(1 mark)

= Budgeted Overhead – Actual Overhead

= ` 98,000 – ` 90,000

= ` 8,000(F)

d. Overhead Volume Variance(1 mark)

= Recovered/Absorbed Overhead – Budgeted Overhead

= 950 Units × 5 hrs. × `20 – ` 98,000 = ` 3,000(A)

Question6 (8 marks)

Statement Showing Sales Budget for 2015-16 (4 marks)

Division	Product X			Product Y			Total
	Qty.	Rate (`)	Amt. (`)	Qty.	Rate (`)	Amt. (`)	Amt. (`)
East	500[1]	10	5,000	400[3]	20	8,000	13,000
West	700[2]	10	7,000	600[4]	20	12,000	19,000
Total	1,200		12,000	1,000		20,000	32,000

Workings

1. 400 × 110% + 60 = 500 units
2. 600 × 105% + 70 = 700 units
3. 300 × 120% + 40 = 400 units
4. 500 × 110% + 50 = 600 units

Statement Showing Sales Budget for 2014-15 (2 marks)

Division	Product X			Product Y			Total
	Qty.	Rate (`)	Amt. (`)	Qty.	Rate (`)	Amt. (`)	Amt. (`)
East	400	9	3,600	300	21	6,300	9,900
West	600	9	5,400	500	21	10,500	15,900
Total	1,000		9,000	800		16,800	25,800

Statement Showing Actual Sales for 2014-15 (2 marks)

Division	Product X			Product Y			Total
	Qty.	Rate (`)	Amt. (`)	Qty.	Rate (`)	Amt. (`)	Amt. (`)
East	500	9	4,500	200	21	4,200	8,700
West	700	9	6,300	400	21	8,400	14,700
Total	1,200		10,800	600		12,600	23,400

Question7 (8 marks)

a. **Cost plus contract:** Under cost plus contract, the contract price is ascertained by adding a percentage of profit to the total cost of the work. Such types of contracts are entered into when it is not possible to estimate the contract cost with reasonable accuracy due to unstable condition of material, labour services etc. **(2 marks)**

Following are the advantages of cost plus contract: **(2 marks)**

(i) The contractor is assured of a fixed percentage of profit. There is no risk of incurring any loss on the contract.

(ii) It is useful specially when the work to be done is not definitely fixed at the time of making the estimate.

(iii) Contractee can ensure himself about the 'cost of contract' as he is empowered to examine the books and documents of the contractor to ascertain the veracity of the cost of contract.

b. **Operating Costing**: It is method of ascertaining costs of providing or operating a service. This method of costing is applied by those undertakings which provide services rather than production of commodities. This method of costing is used by transport companies, gas and water works departments, electricity supply companies, canteens, hospitals, theatres, schools etc. **(2 marks)**

Composite units may be computed in two ways: **(2 marks)**

(a) Absolute (weighted average) tones- km., quintal- km. etc.

(b) Commercial (simple average) tonnes- km., quintal-km. etc.

Absolute tonnes-km. are the sum total of tonnes-km. arrived at by multiplying various distances by respective load quantities carried.

Commercial tonnes-km., are arrived at by multiplying total distance km., by average load quantity.

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