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SUGGESTED SOLUTION

IPCC MAY 2017 EXAM

COSTING & FINANCIAL MANAGEMENT

Test Code - I M J 7 1 3 2

BRANCH - (MULTIPLE) (Date : 18.12.2016)

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Answer-1:

- (i) Contribution = Rs. 37.50 - Rs. 17.50 = Rs. 20 per unit.
 Break even Sales Quantity = $\frac{\text{Fixed Cost}}{\text{Contribution margin per unit}} = \frac{\text{Rs.35,00,000}}{\text{Rs.20}} = 1,75,000$ units
 Cash Break even sales Quantity = $\frac{\text{Cash Fixed Cost}}{\text{Contribution margin per unit}} = \frac{\text{Rs.20,00,000}}{\text{Rs.20}} = 1,00,000$ units
- (ii) P/V ratio = $\frac{\text{Contribution/unit}}{\text{Selling Price/unit}} \times 100 = \frac{\text{Rs.20}}{\text{Rs.37.50}} \times 100 = 53.33\%$
- (iii) No. of units that must be sold to earn an Income (EBIT) of Rs. 2, 50,000
 $\frac{\text{Fixed Cost} + \text{Desired EBIT level}}{\text{Contribution margin per unit}} = \frac{35,00,000 + 2,50,000}{20} = 1,87,500$ units
- (iv) After Tax Income (PAT) = Rs.2, 50,000
 Tax rate = 40%
 Desired level of Profit before tax = $\frac{\text{Rs.2,50,000}}{60} \times 100 = \text{Rs.4,16,667}$
 Estimate Sales Level = $\frac{\text{Fixed Cost} + \text{Desired Profit}}{\text{P/V Ratio}}$
 Or, $\left[\frac{\text{Fixed Cost} + \text{Desired Profit}}{\text{Contribution per unit}} \times \text{Selling Price per unit} \right]$
 = $\frac{\text{Rs.35,00,000} + \text{Rs.4,16,667}}{53.33\%} = \text{Rs.73,43,750}$

(4 x 2 = 8 Marks)

Answer- 2 :

Cost Ledger Control Account

Dr.	(Rs.)	Cr.	(Rs.)
To Store Ledger Control A/c	13,000	By Opening Balance	6,85,000
To Balance c/d	9,42,000	By Store ledger control A/c	1,25,000
		By Manufacturing OverheadControl A/c	85,000
		By Wages Control A/c	60,000
	9,55,000		9,55,000

(2 Marks)

Stores Ledger Control Account

Dr.	(Rs.)	Cr.	(Rs.)
To Opening Balance	3,00,000	By WIP Control A/c	1,35,000
To Cost ledger control A/c	1,25,000	By Cost ledger control A/c (Returns)	13,000
		By Balance c/d	2,77,000
	4,25,000		4,25,000

(2 Marks)

WIP Control Account

Dr.	(Rs.)	Cr.	(Rs.)

To Opening Balance	1,50,000	By Finished Stock Ledger Control A/c	2,25,000
To Wages Control A/c	40,000	By Balance c/d	1,85,000
To Stores Ledger Control A/c	1,35,000		
To Manufacturing Overhead Control A/c	85,000		
	4,10,000		4,10,000

(1 Mark)

Finished Stock Ledger Control Account

Dr.			Cr.
	(Rs.)		(Rs.)
To Opening Balance	2,50,000	By Cost of Sales	1,75,000
To WIP Control A/c	2,25,000	By Balance c/d	3,09,000
To Cost of Sales A/c (Sales Return)	9,000		
	4,84,000		4,84,000

(1 Mark)

Manufacturing Overhead Control Account

Dr.			Cr.
	(Rs.)		(Rs.)
To Cost Ledger Control A/c	85,000	By Opening Balance	15,000
To Wages Control A/c	20,000	By WIP Control A/c	85,000
		By Under recovery c/d	5,000
	1,05,000		1,05,000

(1 Mark)

Wages Control Account

Dr.			Cr.
	(Rs.)		(Rs.)
To Transfer to Cost Ledger Control A/c	60,000	By WIP Control A/c	40,000
		By Manufacturing Overhead Control A/c	20,000
	60,000		60,000

(1 Mark)

Cost of Sales Account

Dr.			Cr.
	(Rs.)		(Rs.)
To Finished Stock Ledger Control A/c	1,75,000	By Finished Stock Ledger Control A/c (Sales return)	9,000
		By Balance c/d	1,66,000
	1,75,000		1,75,000

(1 Mark)

Trial Balance

	(Rs.)	(Rs.)
Stores Ledger Control A/c	2,77,000	
WIP Control A/c	1,85,000	
Finished Stock Ledger Control A/c	3,09,000	
Manufacturing Overhead Control A/c	5,000	
Cost of Sales A/c	1,66,000	
Cost ledger control A/c	-	9,42,000
	9,42,000	9,42,000

(1 Mark)

Answer- 3 :

Fixed expenses per month	(Rs.)
Rent (one fourth of the total)	75.00
Lighting (one fifth of the total)	16.00
Foreman's salary (one sixth of the total)	160.00
Sundry expenses-oil, waste etc.	9.00
Insurance (1% on the value of the machine per year)	8.33
Total constant expenses per month	268.33
Total number of hours per annum	4,380
Total number of hours per month	365

(3 Marks)

	(Rs.)	(Rs.)
Fixed expenses per hour : $\frac{\text{Rs.}268.33}{365 \text{ hours}}$		0.735

Variable expenses per hour :

Depreciation :

Cost of the machine 10,000

Less: Scrap value 900

9,100

Depreciation per annum 910

Depreciation per hour: $\frac{910}{4,380 \text{ hours}}$ 0.208

Repairs for the whole life 18,000

for one hour $\frac{\text{Rs.}18,000}{4,380 \times 10 \text{ years}}$ 0.411

Electricity for one hour : 15 units @ 0.05 P 0.750

Machine hour rate : 2.104

(4 Marks)

Answer- 4 :

Computation of Amount of Working Capital required on a Cash Cost basis

Working Notes:

1. Raw material inventory: The cost of materials for the whole year is 60% of the Sales value.

Hence it is 54,000 units x Rs. 200 x $\frac{60}{100}$ = 64,80,000. The monthly consumption of raw material would be Rs. 5,40,000. Raw material requirements would be for two months; hence raw materials in stock would be Rs. 10,80,000.

2. Debtors: Total Cash Cost of Sales = 97,20,000 x $\frac{1.5}{12}$ Rs.12,15,000

3. Work-in-process: (Each unit of production is expected to be in process for one month).

	Rs.
(a) Raw materials in work-in-process (being one month's raw material requirements)	5,40,000
(b) Labour costs in work-in-process	

(It is stated that it accrues evenly during the month. Thus, on the first day of each month it would be zero and on the last day of month the work-in-process would include one month's labour costs. On an average therefore, it would be equivalent to ½ of the month's labour costs)

	45,000
(c) Overheads	<u>90,000</u>
(For ½ month as explained above) Total work-in-process	<u>6,75,000</u>

4. Finished goods inventory:
(1 month's cost of production)

Raw materials	5,40,000
Labour	90,000
Overheads	<u>1,80,000</u>
	<u>8,10,000</u>

5. Creditors: Suppliers allow a one month's credit period. Hence, the average amount of creditors would be Rs. 5,40,000 being one month's purchase of raw materials.

6. Direct Wages payable: The direct wages for the whole year is 54,000 units x Rs. 200 x 10% = 10,80,000. The monthly direct wages would be 90,000 (10,80,000 ÷ 12). Hence, wages payable would be Rs. 90,000.

(6 x 1 = 6 Marks)

Statement of Working Capital Required

	Rs.	Rs.
Current Assets		
Raw materials inventory (Refer to working note 1)	10,80,000	
Debtors (Refer to working note 2)	12,15,000	
Working-in-process (Refer to working note 3)	6,75,000	
Finished goods inventory (Refer to working note 4)	8,10,000	
Cash	<u>2,52,000</u>	40,32,000
Current Liabilities		
Creditors (Refer to working note 5)	5,40,000	
Direct wages payable (Refer to working note 6)	<u>90,000</u>	6,30,000
Estimated working capital requirements (before safety margin of 15%)		34,02,000
Add: Safety margin of 15%		<u>5,10,300</u>
Estimated Working Capital Requirements		<u>39,12,300</u>

(6 Marks)

Answer- 5 :

Statement showing Evaluation of the Proposed Credit Policies

(Amount Rs. in Lakhs)

	Credit policies Proposed				
	Present	I	II	III	IV
Average Collection Period (days)	(20 days)	(30 days)	(40 days)	(50 days)	(60 days)
Sales (Annual)	60.00	65.00	70.00	74.00	75.00
Less: Variable cost (70% of sales)	<u>42.00</u>	<u>45.50</u>	<u>49.00</u>	<u>51.80</u>	<u>52.50</u>
Contribution	18.00	19.50	21.00	22.20	22.50
Less: Fixed Costs	<u>8.00</u>	<u>8.00</u>	<u>8.00</u>	<u>8.00</u>	<u>8.00</u>
Profit	10.00	11.50	13.00	14.20	14.50
Increase in profit compared to present profit: (A)	-	1.50	3.00	4.20	4.50
Investments in debtors (Variable cost+ Fixed cost)	50.00	53.50	57.00	59.80	60.50
Debtors turnover	18	12	9	7.2	6

(360 days/Average collection period)					
Average investment in debtors (Investment in debtors/ Debtors turnover)	2.78	4.46	6.33	8.3	10.08
Additional investment in debtors compared to present level	-	1.68	3.55	5.52	7.30
Required return on additional investment (25%) : (B)	-	0.42	0.89	1.38	1.83
Incremental profit: (A)–(B)	-	1.08	2.11	2.82	2.67

Decision: The Company should adopt the credit policy III (with collection period of 50 days) as it yields a maximum profit to the company.

Another method of solving the above problem is as under:

Statement Showing Evaluation of the proposed Credit Policies

(Rs. in Lakhs)

Particulars	Present Policy 20 days	Policy I 30 days	Policy II 40 days	Policy III 50 days	Policy IV 60 days
A. Expected profit :	60.00	65.00	70.00	74.00	75.00
(a) Sales					
(b) Total Cost:					
(i) Variable Cost @ 70%	42.00	45.50	49.00	51.80	52.50
(ii) Fixed Costs	8.00	8.00	8.00	8.00	8.00
	<u>50.00</u>	<u>53.50</u>	<u>57.00</u>	<u>59.80</u>	<u>60.50</u>
(c) Expected Profit	10.00	11.50	13.00	14.20	14.50
B. Opportunity Cost of Investment in Receivables	0.69	1.11	1.58	2.08	2.52
C. Net Benefits [A-B]	9.31	10.39	11.42	12.12	11.98

Recommendation: The credit policy III (i.e. 50 days credit) should be adopted since the net benefits under this policy are higher than those under other policies.

Working Note

Calculation of Opportunity Cost of Investments in Receivables:

Opportunity Cost	= Total Cost x $\frac{\text{Collection Period}}{360}$ x $\frac{\text{Rate of Return}}{100}$
Present Policy	= Rs.50 lakhs x $\frac{20}{360}$ x $\frac{25}{100}$ = Rs.0.69 lakh
Proposed Policy I	= Rs.53.50 lakhs x $\frac{30}{360}$ x $\frac{25}{100}$ = Rs.1.11 lakh
Present Policy II	= Rs.57.00 lakhs x $\frac{40}{360}$ x $\frac{25}{100}$ = Rs.1.58 lakh
Present Policy III	= Rs.59.80 lakhs x $\frac{50}{360}$ x $\frac{25}{100}$ = Rs.2.08 lakh
Present Policy IV	= Rs.60.50 lakhs x $\frac{60}{360}$ x $\frac{25}{100}$ = Rs.2.52 lakh

(13 Marks)