# IPCC – MAY 2018

**PAPER 4: COST ACCOUNTING AND FINANCIAL MANAGEMENT**

**Test Code: OTS 3**
**Branch (MULTIPLE) Date : 9.4**

**(100 Marks)**

**Note:** ***Question No.1 is compulsory. Candidates are required to answer any five questions from the remaining six questions.***

**Question 1**

**a.**

Increase in hourly rate of wages under Rowan Plan is ₹ 30 i.e. (₹180 – ₹ 150)

$\frac{\text{Time Saved}}{\text{Time Allowed}} \times ₹150 = ₹30$ (Please refer Working Note)

Or, $\frac{\text{Time Saved}}{50 \text{ hours}} \times ₹150 = ₹30$

Or, Time saved = $\frac{1,500}{150}$ = 10 hours

Therefore, Time Taken is 40 hours i.e. (50 hours – 10 hours)

Effective Hourly Rate under Halsey System:

| | | |
|---|---|---|
| Time saved | = 10 hours | |
| Bonus @ 50% | = 10 hours × 50% × ₹ 150 | = ₹ 750 |
| Total Wages | = (₹150 × 40 hours + ₹ 750) | = ₹ 6,750 |
| Effective Hourly Rate | = ₹ 6,750 ÷ 40 hours | = ₹ 168.75 |

**Working Note:**

$$\text{Effective hourly rate} = \frac{(\text{Time Taken} \times \text{Rate per hour}) + \frac{\text{Time Taken}}{\text{Time Allowed}} \times \text{Time Saved} \times \text{Rate per hour}}{\text{Time Taken}}$$

$$\text{Or, } ₹180 = \frac{\text{Time Taken} \times \text{Rate per hour}}{\text{Time Taken}} + \frac{\frac{\text{Time Taken}}{\text{Time Allowed}} \times \text{Time Saved} \times \text{Rate per hour}}{\text{Time Taken}}$$

$$\text{Or, } ₹180 - \frac{\text{Time Taken} \times \text{Rate per hour}}{\text{Time Taken}} = \frac{\text{Time Taken}}{\text{Time Allowed}} \times \text{Time Saved} \times \text{Rate per hour} \times \frac{1}{\text{Time Taken}}$$

$$\text{Or, } ₹180 - ₹150 = \frac{\text{Time Saved}}{\text{Time Allowed}} \times ₹150$$

**b.**

(1 to 4 – 1 mark for each, 5,6 – ½ marks for each)

| **In the Books of Armaan Ltd** | | | |
|---|---|---|---|
| **Journal Entries under Integrated system of accounting** | | | |
| **Particulars** | | **Amount in Rs.** | **Amount in Rs.** |
| (i) Work-in-Progress Ledger Control A/ | Dr | 1,62,500 | |
| Factory Overhead Control A/c | Dr | 57,500 | |
| To Stores Ledger Control A/c | | | 2,20,000 |
| (Being issue of Direct and Indirect materials) | | | |
| | | | |
| (ii) Work-in Progress Ledger Control A/c | Dr | 2,76,250 | |
| Factory Overhead control A/c | Dr | 48,750 | |
| To Wages Control A/c | | | 3,25,000 |
| (Being allocation of Direct and Indirect wages) | | | |
| | | | |
| (iii) Factory Overhead Control A/c | Dr | 2,50,000 | |
| To Costing Profit & Loss A/c | | | 2,50,000 |
| (Being transfer of over absorption of Factory overhead) | | | |
| | | | |
| Costing Profit & Loss A/c | Dr | 1,75,000 | |
| To Administration Overhead Control A/c | | | 1,75,000 |
| (Being transfer of under absorption of Administration overhead) | | | |
| | | | |
| (iv) Sundry Creditors A/c | Dr | 1,50,000 | |
| To Cash/ Bank A/c | | | 1,50,000 |
| (Being payment made to creditors) | | | |
| | | | |
| (v) Cash/ Bank A/c | Dr | 4,00,000 | |
| To Sundry Debtors A/c | | | 4,00,000 |
| (Being payment received from debtors) | | | |

**c.**

| Calculation of Working Capital Requirement | | |
|---|---|---|
| (A) Current Assets | | |
| (i) Stock of material for 4 weeks (192,000 x 40 x 4/52) | | 5,90,770 |
| (ii) Work in progress for ½ month or 2 weeks | | |
| Material (192000 x 40 x 2/52) 0.50 | 1,47,692 | |
| Labour (192000 x 15 x 2/52) 0.50 | 55,384 | |
| Overhead (192,000 x 30 x 2/52) 0.50 | 1,10,770 | 3,13,846 |
| (iii) Finished stock (192,000 x 85 x 4/52) | | 12,55,384 |
| (iv) Debtors for 2 months (192,000 x 85 x 8/52) | | 25,10,770 |
| Cash in hand or at bank | | 1,00,000 |
| Investment in Current Assets | | 47,70,770 |
| (B) Current Liabilities | | |
| (i) Creditors for one month (192,000 x 40 x 4/52) | | 5,90,770 |
| (ii) Average lag in payment of expenses | | |
| Overheads (192,000 x 30 x 4/52) | 4,43,076 | |
| Labour (192,000 x 15 x 3/104) | 83,076 | 5,26,152 |
| Current Liabilities | | 11,16,922 |
| Net working capital (A – B) | | 36,53,848 |
| | | |

3 marks

2 marks

**d.**

| | |
|---|---|
| The net profit is calculated as follows: | |
| Sales Revenue | 45,00,000 |
| Less: Direct Cost | 30,00,000 |
| Gross Profit | 15,00,000 |
| Less : operating cost | 4,80,000 |
| EBIT | 10,20,000 |
| Less: Interest at 9% | 1,35,000 |
| EBT | 8,85,000 |
| Less : taxes at 40% | 3,54,000 |
| PAT | 5,31,000 |
| | |
| i) Net profit Margin = EBIT (1-t) *100 /Sales | |
| =102000(1-0.40)*100/4500000 | 0.136 |
| | |
| ii) Return on assets = EBIT (1-t) *100 /Total Assets | 0.122 |
| =102000(1-0.40)*100/5000000 | |
| | |
| ii) Asset Turnover = Sales/ Assets | |
| =4500000/5000000 | 0.900 |
| | |
| iv) Return on Equity | |
| ROE= PAT/Equity | |
| =531000/3500000 | 0.152 |
| | |

**Question 2**

**a.**

**(2 marks for each)**

| |
|---|
| (i) Contribution = ` 37.50 - ` 17.50 = ` 20 per unit. |
| Break even Sales Quantity = Fixed cost |
| Contribution margin per unit |
| ( 35,00,000 ÷ 20) units |
| =1,75,000 units |
| Cash Break even Sales Qty= Cash Fixed Cost |
| Contribution margin per unit |
| ( 20,00,000 ÷ 20) units |
| =1, 00,000 units. |
| |
| (ii) P/V ratio = Contribution/ unit x 100 |
| Selling Pr ice / unit |
| (20/37.5x100) |
| `= 53.33 % |
| |
| |
| (iii) No. of units that must be sold to earn an Income (EBIT) of 2, 50,000 |
| Fixed cost + Desired EBIT level |
| Contribution margin per unit |
| = 35,00,000 +2,50,000 |
| 20 |
| = 1,87,500 units |
| |
| (iv) After Tax Income (PAT) = `2, 50,000 |
| Tax rate = 40% |
| Desired level of Profit before tax = (2,50,000 /60 ) x 100 = 4,16,667 |
| Estimate Sales Level = FixedCost + DesiredPr ofit |
| P / V ratio |
| **OR** |
| Estimated Sales Level = Fixed Cost + Desired Profit x S.P. p.u. |
| Contribution per unit |
| (3500000+416667)/53.33% = 73,43,750 |
| |

b.

| **(1) Statement of Operating Profit:** | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | *Rs. in lacs* | |
| **Particulars** | **Note No.** | **1** | **2** | **3** | **4** | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Sales** | A | **3,220** | **3,220** | **4,180** | **4,180** | |
| Material Consumption | | 300 | 400 | 850 | 850 | |
| Wages | | 600 | 650 | 850 | 1,000 | |
| Other expenses | | 400 | 450 | 540 | 700 | |
| Factory overheads (insurance) | | 300 | 300 | 300 | 300 | |
| Loss of rent | | 100 | 100 | 100 | 100 | |
| Interest | | 320 | 240 | 160 | 80 | |
| Depreciation | | 500 | 380 | 280 | 210 | |
| **Total Cost** | B | **2,520** | **2,520** | **3,080** | **3,240** | |
| **Profit (A)-(B)** | C | **700** | **700** | **1,100** | **940** | |
| Tax @50% | | (350) | (350) | (550) | (470) | |
| **PAT** | D | **350** | **350** | **550** | **470** | |
| **(2) Statement of Incremental Casflows:** | | | | | | |
| | | | | | | *Rs. in lacs* |
| **Particulars** | **Note No.** | **0** | **1** | **2** | **3** | **4** |
| Material Stocks | | (200) | (350) | - | - | 550 |
| Compensation for contract | | (300) | - | - | - | - |
| Contract payment saved | | - | 500 | 500 | 500 | 500 |
| Tax on contract payment | | - | (250) | (250) | (250) | (250) |
| Incremental profit | | - | 700 | 700 | 1,100 | 940 |
| Depreciation added back | | - | 500 | 380 | 280 | 210 |
| Tax on profits | | - | (350) | (350) | (550) | (470) |
| Loan repayment | | - | (500) | (500) | (500) | (500) |
| Profit on sale of machinery (net) | | - | - | - | - | 50 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Total incremental cash flows** | A | **(500)** | **250** | **480** | **580** | **1,030** |
| PV Factor | | 1.000 | 0.870 | 0.756 | 0.658 | 0.572 |
| **NPV of cashflows** | B | **(500)** | **218** | **363** | **382** | **589** |
| **NPV** | C | **1,051** | | | | |
| Advice: Since the net present value of cash flows is ` 1,051 lacs which is positive the management should install the machine for processing the waste. | | | | | | |
| ***Notes:***<br>1. Material stock increases are taken in cash flows.<br>2. Idle time wages have also been considered<br>3. Apportioned factory overheads are not relevant only insurance charges of this project are relevant.<br>4. Interest calculated at 16% based on 4 equal instalments of loan repayment.<br>5. Sale of machinery- Net income after deducting removal expenses taken. Tax on Capital gains ignored.<br>6. Saving in contract payment and income tax thereon considered in the cash flows. | | | | | | |

**Question 3**

**a.**

| **(a) Flexible Budget before marketing efforts: (4 marks)** | Mixer(`) | | Juicer (`) | |
|---|---|---|---|---|
| | 6,000 units | | 9,000 units | |
| | Per unit | Total | Per unit | Total |
| Sales | 120 | 7,20,000 | 78 | 7,02,000 |
| Raw material cost | 60 | 3,60,000 | 42 | 3,78,000 |
| Direct labour cost per unit | 30 | 1,80,000 | 18 | 1,62,000 |
| Variable overhead per unit | 12 | 72,000 | 6 | 54,000 |
| Fixed overhead per unit | 8 | 48,000 | 4 | 36,000 |
| Total cost | 110 | 6,60,000 | 70 | 6,30,000 |

| | | | | |
|---|---|---|---|---|
| Profit | 10 | 60,000 | 8 | 72,000 |
| | | | | |
| **(b) Flexible Budget after marketing efforts: (4 marks)** | Mixer (`) | | juicer (`) | |
| | 7,500 units | | 9,500 units | |
| | Per unit | Total | Per unit | Total |
| Sales | 120 | 9,00,000 | 78 | 7,41,000 |
| Raw material cost | 60 | 4,50,000 | 42 | 3,99,000 |
| Direct labour cost per unit | 30 | 2,25,000 | 18 | 1,71,000 |
| Variable overhead per unit | 13 | 99,000 | 7 | 62,700 |
| Fixed overhead per unit | 7 | 50,400 | 4 | 37,800 |
| Total cost | 110 | 8,24,400 | 71 | 6,70,500 |
| Profit | 10 | 75,600 | 7 | 70,500 |
| | | | | |

b.

**(A)** (i) Equipment's initial cost = ` 60,00,000 + 8,00,000 = ` 68,00,000
(ii) Annual straight line depreciation = ` 60,00,000/5 = ` 12,00,000
(iii) Net cash flows can be calculated as follows:
= Before tax CFs × (1 – Tc) + Tc × Depreciation

| | | *(Rs. In '000)* | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | *CFs* | | | | | | |
| **Year** | **Note No.** | ***0*** | **1** | **2** | **3** | **4** | **5** | |
| Initial Cost | 1 | (6,800.00) | | | | | | |
| Before Tax CFs | 2 | - | 2,400.00 | 2,750.00 | 2,100.00 | 1,800.00 | 1,600.00 | |
| Tax @35% | 3 | - | 840.00 | 962.50 | 735.00 | 630.00 | 560.00 | |
| After Tax CFs | 4 | (6,800.00) | 1,560.00 | 1,787.50 | 1,365.00 | 1,170.00 | 1,040.00 | |
| Depreciation tax shield (Depreciation x Tc) | 5 | - | 420.00 | 420.00 | 420.00 | 420.00 | 420.00 | |
| Working Capital released | 6 | - | - | - | - | - | 800.00 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Net Cash Flow (4+5+6) | 7 | (6,800.00) | 1,980.00 | 2,207.50 | 1,785.00 | 1,590.00 | 2,260.00 | |
| PVF at 12% | 8 | 1.0000 | 0.8929 | 0.7972 | 0.7118 | 0.6355 | 0.5674 | |
| PV (7 x 8) | 9 | (6,800.00) | 1,767.94 | 1,759.82 | 1,270.56 | 1,010.45 | 1,282.32 | |
| **NPV at 12%** | 10 | **291.09** | | | | | | |
| PVF at 12% | 11 | 1.0000 | 0.8696 | 0.7561 | 0.6575 | 0.5718 | 0.4972 | |
| PV (7 x 11) | 12 | (6,800.00) | 1,721.81 | 1,669.09 | 1,173.64 | 909.16 | 1,123.67 | |
| **NPV at 15%** | 13 | **(202.63)** | | | | | | |

**(B) Internal Rate of Return**
IRR = 12% + (291.09/493.72)*3%
**= 13.77%**
**(C) Discounted Payback Period**
Discounted CFs at K = 12% considered = 1,767.94 + 1,759.82 + 1,270.56 + 1,010.45 +[1,282.32*(9,91.23/1,282.32)]
**= 4 years and 9.28 months**
Payback Period (NCFs are considered)
= 1,980 + 2,207.50 + 1,785.00 + [1,590.00*(762.50/1,590)]
**= 3 years and 6.25 months**

**Question 4**
**a.**

| **Statement of Equivalent Production (Average Cost Method) - 2 Marks** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Particulars** | **Total Units** | **DM - 1** | | **DM - 2** | | **Labour** | | **Overheads** | |
| | | **%** | **Units** | **%** | **Units** | **%** | **Units** | **%** | **Units** |
| Units completely processed | 17,000 | 100 | 17,000 | 100 | 17,000 | 100 | 17,000 | 100 | 17,000 |
| Normal Loss (10% of [20,000 units - 4,000 units]) (Refer WN) | 1,800 | - | - | - | - | - | - | - | - |
| Abnormal Gain | -800 | 100 | -800 | 100 | -800 | 100 | -800 | 100 | -800 |
| Closing Stock | 4,000 | 100 | 4,000 | 80 | 3,200 | 60 | 2,400 | 40 | 1,600 |
| | | | | | | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **22,000** | | **20,200** | | **19,400** | | **18,600** | | **17,800** |
| | | | | | | | | | |

| **Statement of Cost – 2 Marks** | | | | | |
|---|---|---|---|---|---|
| **Particulars** | **Cost** | **Equivalent Units** | **Rate/Equivalent Units** | | |
| *Material 1* | | | | | |
| Op bal : 2,000 units | 12,350 | | | | |
| Cost of 20,000 units @ Rs. 6/- p.u | 1,20,000 | | | | |
| Less : Scrap realised (1,800 units x Rs. 4) | -7,200 | | | | |
| | 1,25,150 | 20,200 | 6.1955 | | |
| *Material 2* | | | | | |
| Op Stock | 13,200 | | | | |
| In Process 2 | 60,000 | | | | |
| | 73,200 | 19,400 | 3.7732 | | |
| *Labour* | | | | | |
| Op Stock | 17,500 | | | | |
| In Process 2 | 90,000 | | | | |
| | 1,07,500 | 18,600 | 5.7796 | | |
| | | | | | |
| *Overheads* | | | | | |
| Op Stock | 11,000 | | | | |
| In Process 2 | 95,000 | | | | |
| | 1,06,000 | 17,800 | 5.9551 | | |
| | | | | | |
| | | | **21.7034** | | |
| | | | | | |
| | | | | | |
| **Statement of Evaluation - 1 Marks** | | | | | |
| | | | | | |
| Cost of 17,000 finished goods units (17,000 x Rs. 21.7034) | 3,68,957 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Cost of 800 abnormal units (800 x Rs. 21.7034) | 17,363 | | | | |
| *Cost of 4,000 Closing WIP* | | | | | |
| DM - 1 (4,000 x Rs. 6.1955) | 24,782 | | | | |
| DM - 2 (3,200 x Rs. 3.7732) | 12,074 | | | | |
| DL (2,400 x Rs. 5.7796) | 13,871 | | | | |
| Overheads (1,600 x Rs. 5.9551) | 9,528 | | | | |
| | 60,255 | | | | |
| | | | | | |
| | **4,46,575** | | | | |
| | | | | | |
| **Process 3 A/c - 1 Marks** | | | | | |
| **Particulars** | **Units** | **Rs.** | **Particulars** | **Units** | **Rs.** |
| To Opening WIP | 2,000 | 54,050 | By Normal Loss | 1,800 | 7,200 |
| To Opening 2 | 20,000 | 1,20,000 | By Finished goods units | 17,000 | 3,68,957 |
| To DM - 2 | | 60,000 | By Closing Balance | 4,000 | 60,255 |
| To Direct Labour | | 90,000 | | | |
| To Overhead | | 95,000 | | | |
| To Abnormal Gain | 800 | 17,363 | | | |
| | | | | | |
| | **22,800** | **4,36,413** | | **22,800** | **4,36,413** |

**b.**

| |
|---|
| (a) Preparation of Balance Sheet of a Company |
| Working Notes: |
| (i) Cost of Goods Sold = Sales – Gross Profit (= 25% of Sales) |
| ` 30,00,000 – ` 7,50,000 |
| ` 22,50,000 |
| (ii) Closing Stock = Cost of Goods Sold / Stock Turnover |
| ` 22,50,000/6 |
| ` 3,75,000 |
| (iii) Fixed Assets = Cost of Goods |

| |
|---|
| Sold / Fixed Assets Turnover |
| ` 22,50,000/1.5 |
| ` 15,00,000 |
| (iv) Current Assets : Current Ratio = 1.5 and Liquid Ratio = 1 |
| Stock = 1.5 – 1 = 0.5 |
| Current Assets = Amount of Stock x 1.5/0.5 |
| = ` 3,75,000 x 1.5/0.5 = ` 11,25,000 |
| (v) Liquid Assets (Debtors and Cash) |
| Current Assets - Stock |
| = ` 11,25,000 – ` 3,75,000 |
| = ` 7,50,000 |
| (vi) Debtors = Sales x Debtors Collection period /12 |
| = ` 30,00,000 x 2 /12 |
| = ` 5,00,000 |
| (vii) Cash = Liquid Assets – Debtors |
| = ` 7,50,000 – ` 5,00,000 = ` 2,50,000 |
| (viii) Net worth = Fixed Assets /1.2 |
| = ` 15,00,000/1.2 = ` 12,50,000 |
| (ix) Reserves and Surplus |
| Reserves and Share Capital = 0.6 + 1 = 1.6 |
| Reserves and Surplus = ` 12,50,000 x 0.6/1.6 |
| = ` 4,68,750 |
| (x) Share Capital = Net worth – Reserves and Surplus |
| = ` 12,50,000 – ` 4,68,750 |
| = ` 7,81,250 |
| (xi) Current Liabilities = Current Assets/ Current Ratio |
| = ` 11,25,000/1.5 = ` 7,50,000 |
| (xii) Long-term Debts |
| Capital Gearing Ratio = Long-term Debts / Equity Shareholders' Fund |
| Long-term Debts = ` 12,50,000 x 0.5 = ` 6,25,000 |

| Balance Sheet of a Company | | | |
|---|---|---|---|
| Liabilities | Amount (Rs.) | Assets | Amount (Rs.) |
| Equity Share Capital | 7,81,250 | Fixed Assets | 15,00,000 |
| Reserves and Surplus | | Current | |

| | | | |
|---|---|---|---|
| | 4,68,750 | Assets | |
| Long-term Debts | 6,25,000 | Stock | 3,75,000 |
| Current Liabilities | 7,50,000 | Debtors | 5,00,000 |
| | | Cash | 2,50,000 |
| | 26,25,000 | | 26,25,000 |
| (b) Statement Showing Working Capital Requirement | | | |
| A. Current Assets | | | |
| Stock | 3,75,000 | | |
| Debtors | 5,00,000 | | |
| Cash | 2,50,000 | 11,25,000 | |
| B. Current Liabilities | | 7,50,000 | |
| Working Capital before Provision (A – B) | | 3,75,000 | |
| Add: Provision for Contingencies @ 10% of Working Capital including Provision i.e. 1/9th of Working Capital before Provision : 3,75,000 x 1/9 | | 41,667 | |
| Working Capital Requirement including Provision | | 4,16,667 | |

**Question 5**

**a.**

| **(a) Statement of Profit under Absorption Costing :- (3 marks)** | | | |
|---|---|---|---|
| **Particulars** | **April** | **May** | **June** |
| Sales (units) | 4,600 | 4000 | 5400 |
| Selling price per unit | 2,000 | 2000 | 2000 |
| Sales value (A) | 92,00,000 | 80,00,000 | 1,08,00,000 |
| Cost of Goods Sold: | | | |
| Opening Stock @ 1290 | - | 258000 | 1032000 |
| Production cost @ 1290 | 61,92,000 | 59,34,000 | 70,95,000 |
| Closing Stock @ 1290 | (2,58,000) | (10,32,000) | (11,61,000) |

| | | | |
|---|---|---|---|
| Under/ (Over) absorption | 1,20,000 | 1,40,000 | 50,000 |
| Add: Fixed Selling Overheads | 90,000 | 90,000 | 90,000 |
| Cost of Sales (B) | 61,44,000 | 53,90,000 | 71,06,000 |
| Profit (A – B) | 30,56,000 | 26,10,000 | 36,94,000 |
| **Workings:** | | | |
| **1. Calculation of full production cost** | | | |
| Direct Materials (4 kg. × ` 110) | 440 | | |
| Direct labour (6 hours × ` 50) | 300 | | |
| Variable production Overhead (150% of ` 300) | 450 | | |
| Total Variable cost | 1,190 | | |
| Fixed production overhead ( 50,00,000 / 50000 ) | 100 | | |
| | 1,290 | | |
| **2. Calculation of Opening and Closing stock** | | | |
| | **April** | **May** | **June** |
| Opening Stock | - | 200 | 800 |
| Add: Production | 4,800 | 4600 | 5500 |
| Less: Sales | 4,600 | 4000 | 5400 |
| Closing Stock | **200** | **800** | **900** |
| | | | |
| | | | |
| **3. Calculation of Under/Over absorption of fixed production overhead (1 mark)** | | | |
| | **April** | **May** | **June** |
| Actual Overhead | 6,00,000 | 6,00,000 | 6,00,000 |
| Overhead absorbed | 4,80,000 | 460000 | 550000 |
| | (4800x 100 ) | (4600x 100 ) | (5500x100 ) |
| Under/(Over) absorption | | | |
| | **1,20,000** | **1,40,000** | **50,000** |

**(b) Statement of Profit under Marginal Costing:- (2 marks)**

| | April | May | June |
|---|---|---|---|
| Sales (units) | 4,600 | 4000 | 5400 |
| Selling price per unit | 2,000 | 2000 | 2000 |
| Sales value | 92,00,000 | 80,00,000 | 1,08,00,000 |
| Less: Variable production cost | 54,74,000 | 47,60,000 | 64,26,000 |
| Contribution | 37,26,000 | 32,40,000 | 43,74,000 |
| Less: Fixed Production Overheads | 6,00,000 | 6,00,000 | 6,00,000 |
| Less: Fixed Selling Overheads | 90,000 | 90,000 | 90,000 |
| Profit | **30,36,000** | **25,50,000** | **36,84,000** |

**(c) Reconciliation of profit under Absorption costing to Marginal Costing :- (2 marks)**

| | April | May | June |
|---|---|---|---|
| Profit under Absorption Costing | 30,56,000 | 26,10,000 | 36,94,000 |
| Add: Opening Stock | - | 20,000 | 80,000 |
| | (0 x100) | (100*200) | (100*800) |
| Less: Closing Stock | 20,000 | 80,000 | 90,000 |
| | (200x 100) | (800 x 100 ) | (900 x100 ) |
| | | | |
| Profit under Marginal Costing | **30,36,000** | **25,50,000** | **36,84,000** |
| | | | |

**B**

| Computation of the weighted average cost of capital | | | |
|---|---|---|---|
| Source of Finance | Proportion | After tax cost (%) (1-tax rate i.e. 50%) | Weighted average cost of capital (%) |
| (a) | (b) | (c) | (d)=(b)x(c) |
| Equity share | 0.5 | 15.09 | 7.54 |

| | | | |
|---|---|---|---|
| 10% Preference share | 0.2 | 10 | 2 |
| 12% Debentures | 0.3 | 6 | 1.8 |
| Weighted average cost of capital | | | 11.34 |
| | | | |
| Computation of Revised weighted average cost of capital | | | |
| Source of finance | Proportion | After tax cost (%) (1-tax rate i.e. 50%) | Weighted average cost of capital (%) |
| Equity shares | 0.333 | 17.42 | 5.80 |
| 10% Preference shares | 0.133 | 10.00 | 1.33 |
| 12% Debentures | 0.2 | 6.00 | 1.20 |
| 14% Loan | 0.333 | 7.00 | 2.33 |
| Revised weighted average cost of capital | | | 10.66 |
| Working Notes: | | | |
| (1) Cost of equity shares (Ke)<br>Ke = (Dividend per share/Market Pri) + i<br>=(10/110)+0.06 | | | |
| =15.09% | | | |
| (2) Revised cost of Equity Shares (Ke) | | | |
| Revised Ke = (12/105)+0.06 = 17.43% | | | |

**Question 6**

**a. (2 marks for each point)**

**(i) Standard cost for Actual output:**

Material X = 1,500 units × 2,000 kg. × ` 1 = 30,00,000

Material Y = 1,500 units × 800 kg. × ` 1.50 = 18,00,000 ` 48,00,000

**(ii) Material Cost Variance:**

= Standard Cost for actual output – Actual Cost

= (SQ × SP) – (AQ × AP)

Material X = {30,00,000 - (31,00,000 kg. × ` 1.10)}

= 30,00,000 – 34,10,000 = 4,10,000 (A)

Material Y = {18,00,000 – (12,50,000 kg. × ` 1.60)}

= 18,00,000 – 20,00,000 = 2,00,000 (A) 6,10,000 (A)

**(iii) Material Price Variance:**

= AQ (SP – AP)

Material X = 31,00,000 kg. (` 1.00 – ` 1.10) = 3,10,000 (A)

Material Y = 12,50,000 kg. (` 1.50 – ` 1.60) = 1,25,000 (A) 4,35,000 (A)

**(iv) Material Usage Variance:**

= SP (SQ – AQ)

Material X = ` 1.00 {(1,500 × 2,000) – 31,00,000}

= 30,00,000 – 31,00,000 = 1,00,000 (A)

Material Y = ` 1.50 {(1,500 × 800) – 12,50,000}

= ` 1.50 (12,00,000 – 12,50,000) = 75,000 (A) = 1,75,000 (A)

b)

| |
|---|
| Role of Finance Manager in the Changing Scenario of Financial Management in India: In |
| the modern enterprise, the finance manager occupies a key position and his role is becoming |
| more and more pervasive and significant in solving the finance problems. The traditional role |
| of the finance manager was confined just to raising of funds from a number of sources, but the |
| recent development in the socio-economic and political scenario throughout the world has |
| placed him in a central position in the business organisation. He is now responsible for |
| shaping the fortunes of the enterprise, and is involved in the most vital decision of allocation of |
| capital like mergers, acquisitions, etc. He is working in a challenging environment which |
| changes continuously. |
| Emergence of financial service sector and development of internet in the field of information |
| technology has also brought new challenges before the Indian finance managers. Development of |
| new financial tools, techniques, instruments and products and emphasis on public sector |
| undertaking to be self-supporting and their dependence on capital market for fund requirements |
| have all changed the role of a finance manager. His role, especially, assumes significance in the |
| present day context of liberalization, deregulation and globalization |

c)

| |
|---|
| Maturity value of the investment may be found from FVn = P (1+i) raised to n<br>P=12000, n= 5*12=60, i=12/12=1%<br>FVn= 12000/ (1+1%) raised to 60= 12000*1.181669670= Rs 21,800 |
| The present value, P of the amount FVn due at the end of n interest periods at the rate of i% interest per period is given by<br>P = FVn (1 + i) raised to −n<br>FV= 21800, i=8/4=2%, n=5*4=20<br>P=21800(1+2%) raised to -20<br>P=21800*0.67297133=14671.02 |

**Question 7** ***A****ttempt any* ***four*** *of the following*
***A****ttempt any* ***four*** *of the following*

**a. (1 mark each)**

| **Industry** | **Method of Costing** |
|---|---|
| (a) Oil Refinery | – Process costing |
| (b) Bicycle manufacturing | – Multiple costing |
| (c) Interior decoration | – Job costing |
| (d) Airlines | – Operating costing |

**b. (4 marks)**

**Explicit costs:** These costs are also known as out of pocket costs. It refers to those costs which involves immediate payment of cash. Salaries, wages, postage and telegram, interest on loan etc. are some examples of explicit costs because they involve immediate cash payment. These payments are recorded in the books of account and can be easily measured.

*Main points of difference:* The following are the main points of difference between Explicit and Implicit costs.

(i) Implicit costs do not involve any immediate cash payment. As such they are also known as imputed costs or economic costs.

(ii) Implicit costs are not recorded in the books of account but yet, they are important for certain types of managerial decisions such as equipment replacement and relative profitability of two alternative courses of action.

**a.**

a. The financing of current assets involves a trade off between risk and return. A firm can choose from short or long term sources of finance. Short term financing is less expensive than long term financing but at the same time, short term financing involves greater risk than long term financing.**(1 mark)**
b. Depending on the mix of short term and long term financing, the approach followed by a company may be referred as matching approach, conservative approach and aggressive approach. **(1 mark)**
c. In matching approach, long-term finance is used to finance fixed assets and permanent current assets and short term financing to finance temporary or variable current assets. Under the conservative plan, the firm finances its permanent assets and also a part of temporary current assets with long term financing and hence less risk of facing the problem of shortage of funds. **(1 mark)**
d. An aggressive policy is said to be followed by the firm when it uses more short term financing than warranted by the matching plan and finances a part of its permanent current assets with short term financing. **(1 mark)**

**b.**

**i)** Time Value of Money: **(1/2 mark for each point)**

It means money has time value. A rupee today is more valuable than a rupee after a year. Similarly, a rupee received in future is less valuable than it is today. Time value of money can be of two types, present value of money and future value of money. Concept of discounting is applicable to present value of money and compounding is applicable to future value of money.

In a nutshell, time value of money represents monetary value arising out of difference of time.

**ii)** ABC Analysis: It is a system of selective inventory control whereby the measure of control over an item of inventory varies with its usage value. It exercises discriminatory control over different items of stores grouped on the basis of the investment involved. Usually the items of material are grouped into three categories viz; A, B and C according to their use value during a period. In other words, the high use value items are controlled more closely than the items of low use value. **(1 mark)**

'A' Category of items consists of only a small percentage i.e., about 10 % of the total items of material handled by the stores but require heavy investment i.e., about 70% of inventory value, because of their high prices and heavy requirement.

'B' Category of items comprises of about 20% of the total items of material handled by stores. The percentage of investment required is about 20% of the total investment in inventories.

'C category of items does not require much investment. It may be about 10% of total inventory value but they are nearly 70% of the total items handled by stores

**(1 mark)**

**********