MOCK TEST PAPER – 1

INTERMEDIATE (IPC): GROUP – I

PAPER – 3: COST ACCOUNTING AND FINANCIAL MANAGEMENT

SUGGESTED ANSWERS/HINTS

1. (a) (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

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

Product	Piece rate per unit (Rs.)	Worker-I		Worker-II		Worker-III	
		Units	Wages (Rs.)	Units	Wages (Rs.)	Units	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

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. 36,000 respectively.

Working Note:

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

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

Worker	Time Allowed (Hr.)	Time Taken (Hr.)	Time saved (Hr.)	Wage Rate per hour (Rs.)	Earnings (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

Working Note:

1. 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

* $\frac{\text{Time Taken}}{\text{Time Allowed}} \times \text{Time Saved} \times \text{Wage Rate}$

Worker-I = $\frac{380}{402.5} \times 22.5 \times 40 = 850$

Worker-II = $\frac{100}{125} \times 25 \times 50 = 1{,}000$

Worker-III = $\frac{540}{600} \times 60 \times 60 = 3{,}240$

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

$= \frac{\text{Rs.}7{,}50{,}000}{15{,}000 \text{ units}} = \text{Rs.}50$

(ii) Profit = Sales Value – Total Cost

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

= Rs.50 × (5,000 + 15,000) units – Rs.7,75,000

= Rs.10,00,000 – Rs.7,75,000 = Rs.2,25,000

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

$= \frac{\text{Rs.}2{,}25{,}000}{\text{Rs.}7{,}50{,}000} \times 100 = 30\%$

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

= 5,000 units × Rs.50 = Rs.2,50,000

(v) Fixed Cost = Contribution – Profit

= Sales Value × P/V Ratio – Profit

= (Rs.10,00,000 × 30%) – Rs.2,25,000

= Rs.3,00,000 – Rs.2,25,000 = Rs.75,000

(c) (i) Dividend yield on the equity shares

$$= \frac{\text{Dividend per share}}{\text{Market price per share}} \times 100$$

$$= \frac{\text{Rs. 10 x 20\%}}{\text{Rs. 40}} \times 100 = 5\%$$

(ii) Dividend Coverage Ratios:

$$\text{Preference Dividend Coverage Ratio} = \frac{\text{Profit after tax}}{\text{Dividend payable to Pref. shareholders}}$$

$$= \frac{\text{Profit after tax *}}{\text{7\% x Rs. 4,00,000}} = \frac{\text{Rs. 2,80,000}}{\text{Rs. 28,000}} = 10 \text{ times}$$

$$\text{*Profit after tax} = \frac{\text{Tax paid}}{\text{Tax rate}} \times (1 - T)$$

$$= \frac{\text{Rs. 1,20,000}}{30\%} \times (1 - 0.3)$$

$$= \text{Rs. 2,80,000}$$

$$\text{Equity Dividend Coverage Ratio} = \frac{\text{Profit after tax - Pref. dividend}}{\text{Dividend payable to Equity shareholders}}$$

$$= \frac{\text{Rs. 2,80,000 - Rs. 28,000}}{\text{20\% x Rs. 8,00,000}}$$

$$= \frac{\text{Rs. 2,52,000}}{\text{Rs. 1,60,000}} = 1.575$$

(iii) Earnings per equity share(EPS)

$$\text{EPS} = \frac{\text{Profit after tax - Pref. dividend}}{\text{No. of equity share outstanding}}$$

$$\text{EPS} = \frac{\text{Rs. 2,80,000 - Rs. 28,000}}{80,000} = \text{Rs. 3.15}$$

(d) Statement showing value of firm

(i)

	(Rs)
EBIT	5,00,000
Less: Interest on debentures (10% of Rs20,00,000)	(2,00,000)
Earnings available for equity holders i.e. Net Income (NI)	3,00,000
Equity capitalization rate (K_e)	16%
Market value of equity $(S) = \frac{NI}{K_e} = \left(\frac{3,00,000}{16.00} \times 100\right)$	18,75,000
Market value of debt (D)	20,00,000
Total value of firm V = S + D	38,75,000

(ii) Overall cost of capital $= \frac{\text{EBIT}}{\text{Value of firm}} = \frac{5,00,000}{38,75,000} = 12.90\%$

2. (a) (i) Calculation of Economic Order Quantity (E.O.Q)

Annual requirement (usage) of raw material in kg. (A) = $\frac{1,00,000 \text{ units}}{2.5 \text{ units per kg.}} = 40,000 \text{ kg.}$

Ordering Cost (Handling & freight cost) (O) = Rs.1,460 + Rs.940 = Rs.2,400

Carrying cost per unit per annum (C) i.e. inventory carrying cost + working capital cost

= (Rs.2.5 × 12 months) + Rs.18 = Rs.48 per kg.

E.O.Q. $= \sqrt{\frac{2AO}{C}} = \sqrt{\frac{2 \times 40,000 \text{ kg.} \times \text{Rs.}2,400}{\text{Rs.}48}}$ = 2,000 kg.

(ii) Frequency of placing orders for procurement:

Annual consumption (A) = 40,000 kg.

Quantity per order (E.O.Q) = 2,000 kg.

No. of orders per annum $\left(\frac{A}{E.O.Q}\right)$ = $\frac{40,000 \text{ kg.}}{2,000 \text{ kg.}}$ = 20 orders

Frequency of placing orders (in days) = $\frac{360 \text{ days}}{20 \text{ orders}}$ = 18 days

(iii) Percentage of discount in the price of raw materials to be negotiated:

Particulars	On Quarterly Basis	On E.O.Q Basis
1. Annual Usage (in Kg.)	40,000 kg.	40,000 kg.
2. Size of the order	10,000 kg.	2,000 kg.
3. No. of orders (1 ÷ 2)	4	20
4. Cost of placing orders or Ordering cost (No. of orders × Cost per order)	Rs.9,600 (4 order × Rs.2,400)	Rs.48,000 (20 orders × Rs.2,400)
5. Inventory carrying cost (Average inventory × Carrying cost per unit)	Rs.2,40,000 (10,000 kg. × ½ × Rs.48)	Rs.48,000 (2,000 kg. × ½ × Rs.48)
6. Total Cost (4 + 5)	Rs.2,49,600	Rs.96,000

When order is placed on quarterly basis the ordering cost and carrying cost increased by Rs.1,53,600 (Rs.2,49,600 - Rs.96,000).

So, discount required = Rs.1,53,600

Total annual purchase = 40,000 kg. × Rs.180 = Rs.72,00,000

So, Percentage of discount to be negotiated = $\frac{\text{Rs.}1,53,600}{\text{Rs.}72,00,000} \times 100$ = 2.13%

(b) Calculation of Net Working Capital requirement:

Particulars	(Rs.)	(Rs.)
A. Current Assets:		
Inventories:		
Stock of Raw material (Refer to Working note (iii))	1,44,000	
Stock of Work in progress (Refer to Working note (ii))	7,50,000	
Stock of Finished goods (Refer to Working note (iv))	20,40,000	
Debtors for Sales (Refer to Working note (v))	1,02,000	
Cash	2,00,000	
Gross Working Capital	32,36,000	32,36,000
B. Current Liabilities:		
Creditors for Purchases (Refer to Working note (vi)	1,56,000	
Creditors for wages (Refer to Working note (vii)	23,250	
	1,79,250	1,79,250
Net Working Capital (A - B)		**30,56,750**

Working Notes:

(i) Annual cost of production

Particulars	(Rs.)
Raw material requirements {(31,200 × Rs. 40) + (12,000 x Rs. 40)}	17,28,000
Direct wages {(31,200 × Rs. 15) +(12,000 x Rs. 15 x 0.5)}	5,58,000
Overheads (exclusive of depreciation) {(31,200 × Rs. 30) + (12,000 x Rs. 30 x 0.5)}	11,16,000
Gross Factory Cost	34,02,000
Less: Closing W.I.P [12,000 (Rs. 40 + Rs. 7.5 + Rs. 15)]	(7,50,000)
Cost of Goods Produced	26,52,000
Less: Closing Stock of Finished Goods (Rs. 26,52,000 × 24,000/31,200)	(20,40,000)
Total Cash Cost of Sales*	6,12,000

[*Note: Alternatively, TotalCash Cost of Sales = (31,200 units – 24,000 units) x (Rs.40 + Rs. 15+Rs.30) =Rs.6,12,000]

(ii) Work in progress stock

Particulars	(Rs.)
Raw material requirements (12,000 units × Rs.40)	4,80,000
Direct wages (50% × 12,000 units × Rs. 15)	90,000
Overheads (50% × 12,000 units × Rs. 30)	1,80,000
	7,50,000

(iii) Raw material stock

It is given that raw material in stock is average 30 days consumption. Since, the company is newly formed; the raw material requirement for production and work in progress will be

issued and consumed during the year. Hence, the raw material consumption for the year (360 days) is as follows:

Particulars	(Rs.)
For Finished goods (31,200 × Rs. 40)	12,48,000
For Work in progress (12,000 × Rs. 40)	4,80,000
	17,28,000

$$\text{Raw material stock} = \frac{\text{Rs.}17,28,000}{360\,\text{days}} \times 30\,\text{days} = \text{Rs.}1,44,000$$

(iv) Finished goods stock: 24,000 units @ Rs. (40+15+30) per unit = Rs. 20,40,000

(v) Debtors for sale: Rs. 6,12,000 **x** $\frac{60\,\text{days}}{360\,\text{days}}$ = Rs. 1,02,000

(vi) Creditors for raw material Purchases [Working Note (iii)]:

Annual Material Consumed (Rs.12,48,000 + Rs. 4,80,000)	Rs.17,28,000
Add: Closing stock of raw material [(Rs.17,28,000 x 30 days) / 360 days]	Rs. 1,44,000
	Rs.18,72,000

$$\text{Credit allowed by suppliers} = \frac{\text{Rs.}18,72,000}{360\,\text{days}} \times 30\,\text{days} = \text{Rs.}1,56,000$$

(vii) Creditors for wages:

Outstanding wage payment = [(31,200 units x Rs. 15) + (12,000 units x Rs. 15 x .50)] x 15 days / 360 days

$$= \frac{\text{Rs.}5,58,000}{360\,\text{days}} \times 15\,\text{days} = \text{Rs.}23,250$$

3. (a) (i) **Process- A Account**

Particulars	Units	Amount (Rs.)	Particulars	Units	Amount (Rs.)
To Inputs	40,000	3,60,000	By Normal wastage (2,000 units × Rs.15)	2,000	30,000
To Material	---	2,42,000	By Abnormal loss A/c (1,000 units × Rs.27)	1,000	27,000
To Direct wages	---	2,58,000	By Process- B (29,600 units × Rs.27)	29,600	7,99,200
To Manufacturing Exp.	---	1,96,000	By Profit & Loss A/c (7,400 units × Rs.27)	7,400	1,99,800
	40,000	10,56,000		40,000	10,56,000

$$\text{Cost per unit} = \frac{\text{Rs.}10,56,000 - \text{Rs.}30,000}{40,000\,\text{units} - 2,000\,\text{units}} = \text{Rs. } 27 \text{ per unit}$$

Normal wastage = 40,000 units × 5% = 2,000 units

Abnormal loss = 40,000 units – (37,000 units + 2,000 units) = 1,000 units

Transfer to Process- B = 37,000 units × 80% = 29,600 units

Sale = 37,000 units × 20% = 7,400 units

Process- B Account

Particulars	Units	Amount (Rs.)	Particulars	Units	Amount (Rs.)
To Process- A A/c	29,600	7,99,200	By Normal wastage (2,960 units × Rs. 20)	2,960	59,200
To Material	---	2,25,000	By Profit & Loss A/c (27,000 units × Rs. 48)	27,000	12,96,000
To Direct Wages	---	1,90,000			
To Manufacturing Exp.	---	1,23,720			
To Abnormal Gain A/c (360 units × Rs. 48)	360	17,280			
	29,960	13,55,200		29,960	13,55,200

Cost per unit = $\frac{Rs.13,37,920 - Rs.59,200}{29,600\,units - 2,960\,units}$ = Rs. 48 per unit

Normal wastage = 29,600 units × 10% = 2,960 units

Abnormal gain = (27,000 units + 2,960 units) – 29,600 units = 360 units

(ii) Costing Profit & Loss Account

Particulars	Amount(Rs.)	Particulars	Amount(Rs.)
To Process- A A/c	1,99,800	By Sales:	
To Process- B A/c	12,96,000	- Process-A (7,400 units × Rs. 37)	2,73,800
To Abnormal loss A/c	12,000	- Process- B (27,000 units × Rs. 61)	16,47,000
To Indirect Expenses	4,48,080	By Abnormal gain	10,080
		By Net loss	25,000
	19,55,880		19,55,880

Working Notes:

Normal wastage (Loss) Account

Particulars	Units	Amount (Rs.)	Particulars	Units	Amount (Rs.)
To Process- A A/c	2,000	30,000	By Abnormal Gain A/c (360 units × Rs. 20)	360	7,200

To Process- B A/c	2,960	59,200	By Bank (Sales)	4,600	82,000
	4,960	89,200		4,960	89,200

Abnormal Loss Account

Particulars	Units	Amount(Rs.)	Particulars	Units	Amount(Rs.)
To Process- A A/c	1,000	27,000	By Bank A/c (1,000 units × Rs. 15)	1,000	15,000
			By Profit & Loss A/c	---	12,000
	1,000	27,000		1,000	27,000

Abnormal Gain Account

Particulars	Units	Amount(Rs.)	Particulars	Units	Amount(Rs.)
To Normal loss A/c (360 units × Rs. 20)	360	7,200	By Process- B A/c	360	17,280
To Profit & Loss A/c		10,080			
	360	17,280		360	17,280

(b) (i) Expenditure at year zero

(Amount in Rs.)

Particulars	ModelA	ModelB
Cost of Machine	5,00,000	5,00,000
Cost of Utilities	1,00,000	2,10,000
Salvage of Old Machine	(1,00,000)	(1,00,000)
Salvage of Old Utilities	–	(20,000)
Total Expenditure (Net)	5,00,000	5,90,000

Discounted Value of Cash inflows **(Amount in Rs.)**

Year	NPV Factor @15%	Model A		Model B	
		Cash inflows	Discounted value of inflows	Cash in flows	Discounted value of inflows
0	1.00	(5,00,000)	(5,00,000)	(5,90,000)	(5,90,000)
1	0.87	1,00,000	87,000	2,00,000	1,74,000
2	0.76	1,50,000	1,14,000	2,10,000	1,59,600
3	0.66	1,80,000	1,18,800	1,80,000	1,18,800
4	0.57	2,00,000	1,14,000	1,70,000	96,900
5	0.50	1,70,000	85,000	40,000	20,000
Salvage	0.50	50,000	25,000	60,000	30,000
Net Present Value			**43,800**		**9,300**

Discounted Pay-back Period **(Amount in Rs.)**

Year	Model A		Model B	
	Discounted cash inflows	Cumulative Discounted cash inflows	Discounted cash inflows	Cumulative Discounted cash inflows
1	87,000	87,000	1,74,000	1,74,000
2	1,14,000	2,01,000	1,59,600	3,33,600
3	1,18,800	3,19,800	1,18,800	4,52,400
4	1,14,000	4,33,800	96,900	5,49,300
5	1,10,000*	5,43,800	50,000*	5,99,300

* Includes salvage value

Discounted Payback Period (For Model A and Model B):

Model A = 4 years + (Rs. 66,200/ Rs. 1,10,000) = 4.6 years

Model B = 4 years + (Rs. 40,700/ Rs. 50,000) = 4.8 years

Desirability factor or Profitability Index (PI) = $\frac{\text{Net cash inflows}}{\text{Net cash outflows}}$

Model A = $\frac{\text{Rs. 5,43,800}}{\text{Rs. 5,00,000}}$ = 1.088

Model B = $\frac{\text{Rs. 5,99,300}}{\text{Rs. 5,90,000}}$ = 1.016

(ii) Since the absolute surplus in the case of Model A is more than Model B, discounted payback period of Model A is earlier than that of Model B and also the desirability factor (profitability index) is higher in the case of Model A, it is better to choose Model A.

4. (a) **Contract Account for the year ended 31st March, 2020**

Particulars	(Rs.'000)	Particulars	(Rs.' 000)
To Material issued to site	5,000	By Material at site	1,800
To Direct wages 3,800		By Material returned	100
Add: Outstanding wages 110	3,910	By Work-in-progress:	
To Plant hire	700	- Value of work certified	10,000
To Site office cost	270	- Work uncertified	230
To Direct expenses	500		
To Depreciation (special plant)	300		
To Notional profit c/d	1,450		
	12,130		**12,130**

(b) **Cash Flow Statement**

for the year ended 31st March, 2020

Particulars	Amount (Rs.)	Amount (Rs.)
A. Cash flow from Operating Activities		
Profit and Loss A/c (Closing)		18,75,000
Less: Profit and Loss A/c (Opening)		15,00,000
		3,75,000
Add: Transfer to General Reserve	6,75,000	
Provision for Tax	4,50,000	
Proposed Dividend	9,10,000	20,35,000
Profit before Tax		24,10,000
Adjustment for Depreciation:		
Land and Building (on building) (Rs. 68,00,000 - Rs. 61,20,000)	6,80,000	
Plant and Machinery (Rs. 75,12,000 x 20%)	15,02,400	21,82,400
Loss on Sale of Plant and Machinery(Rs. 8,00,000 - Rs. 6,25,000)		1,75,000
Goodwill written off (Rs. 10,00,000 - Rs. 7,75,000)		2,25,000
Interest on 13% Debentures (Rs. 43,50,000 x 13%)		5,65,500
Premium on Redemption[10% of(Rs.58,00,000 - Rs.43,50,000)]		1,45,000
Operating Profit before Working Capital Changes		57,02,900
Adjustment for Working Capital Changes:		
Decrease in Stock	5,50,000	
Increase in Debtors	(11,75,000)	
Increase in Current Liabilities	2,50,000	(3,75,000)
Cash generated from Operations		53,27,900
Income tax paid		(225,000)
Net Cash Inflow from Operating Activities (a)		51,02,900
B. Cash flow from Investing Activities		
Sale of Investment		4,50,000
Sale of Plant and Machinery		6,25,000
Purchase of Plant and Machinery		(55,85,400)
Net Cash Outflow from Investing Activities (b)		(45,10,400)
C. Cash Flow from Financing Activities		
Issue of Equity Shares (Rs. 1,02,50,000 - Rs. 75,00,000)		27,50,000
Redemption of Debentures		(14,50,000)
Redemption of Debentures at premium		(1,45,000)
Dividend paid		(7,50,000)

Interest paid to Debenture holders		(5,65,500)
Net Cash Outflow from Financing Activities (c)		(1,60,500)
Net increase in Cash and Cash Equivalents during the year **(a + b + c)**		4,32,000
Cash and Cash Equivalents at the beginning of the year		14,93,000
Cash and Cash Equivalents at the end of the year		19,25,000

Working Notes:

1. Provision for the Tax Account

Particulars	Rs.		Particulars	Rs.
To Bank (paid) (bal. fig.)	2,25,000	By	Balance b/d	22,50,000
To Balance c/d	24,75,000	By	Profit and Loss A/c (Provision)	4,50,000
	27,00,000			27,00,000

2. Investment Account

Particulars	Rs.		Particulars	Rs.
To Balance b/d	25,00,000	By	Bank A/c (Sale) (bal. fig.)	4,50,000
To General Reserve A/c (Profit on Sale)	75,000	By	Balance c/d	21,25,000
	25,75,000			25,75,000

3. Plant and Machinery Account

Particulars	Rs.	Particulars	Rs.
To Balance b/d	75,12,000	By Bank (Sale)	6,25,000
To Bank A/c (Purchase- Bal. figure)	55,85,400	By Profit and Loss A/c (Loss on sale)	1,75,000
		By Profit and Loss A/c (Depreciation)	15,02,400
		By Balance c/d	1,07,95,000
	1,30,97,400		1,30,97,400

4. Proposed Dividend Account

Particulars	Rs.	Particulars	Rs.
To Bank (paid)	7,50,000	By Balance b/d	7,50,000
To Balance c/d	9,10,000	By Profit and Loss A/c	9,10,000
	16,60,000		16,60,000

5. General Reserve Account

Particulars	Rs.		Particulars	Rs.
		By	Balance b/d	42,50,000
		By	Profit & Loss (transfer from) (bal. fig.)	6,75,000

To Balance c/d	50,00,000	By Investment (Gain on Sale)	75,000
	50,00,000		50,00,000

5. (a) Salient features of Budget Manual

- Budget manual contains many information which are required for effective budgetary planning.
- A budget manual is a collection of documents that contains key information for those involved in the planning process.
- An introductory explanation of the budgetary planning and control process, including a statement of the budgetary objective and desired results is included in Budget Manual
- Budget Manual contains a form of organisation chart to show who is responsible for the preparation of each functional budget and the way in which the budgets are interrelated.
- Copies of all forms to be completed by those responsible for preparing budgets, with explanations concerning their completion is included in Budget Manual.

(b) **Both bin cards and stores ledger** are perpetual inventory records. None of them is a substitute for the other. These two records may be distinguished from the following points of view:

(i) Bin cards are maintained by the store keeper, while the stores ledger is maintained by the cost accounting department.

(ii) Bin card is the stores recording document whereas the stores ledger is an accounting record.

(iii) Bin card contains information with regard to quantities i.e. their receipt, issue and balance while the stores ledger contains both quantitative and value information in respect of their receipts, issue and balance.

(iv) In the bin card entries are made at the time when transaction takes place. But in the stores ledger entries are made only after the transaction has taken place.

(v) Inter departmental transfer of materials appear only in stores ledger.

(vi) Bin cards record each transaction but stores ledger records the same information in a summarized form.

(c) **Commercial Paper:** A Commercial Paper is an unsecured money market instrument issued in the form of a promissory note. The Reserve Bank of India introduced the commercial paper scheme in the year 1989 with a view to enabling highly rated corporate borrowers to diversify their sources of short- term borrowings and to provide an additional instrument to investors. Subsequently, in addition to the Corporate, Primary Dealers and All India Financial Institutions have also been allowed to issue Commercial Papers. Commercial papers are issued in denominations of Rs. 5 lakhs or multiples thereof and the interest rate is generally linked to the yield on the one-year government bond.

All eligible issuers are required to get the credit rating from Credit Rating Information Services of India Ltd, (CRISIL), or the Investment Information and Credit Rating Agency of India Ltd (ICRA) or the Credit Analysis and Research Ltd (CARE) or the FITCH Ratings India Pvt. Ltd or any such other credit rating agency as is specified by the Reserve Bank of India.

(d) The term **trading on equity** means debts are contracted and loans are raised mainly on the basis of equity capital. Those who provide debt have a limited share in the firm's earning and hence want to be protected in terms of earnings and values represented by equity capital. Since fixed charges do not vary with firms earnings before interest and tax, a magnified effect is produced on earning per share. Whether the leverage is favourable, in the sense, increase in earnings per share more proportionately to the increased earnings before interest and tax,

depends on the profitability of investment proposal. If the rate of returns on investment exceeds their explicit cost, financial leverage is said to be positive.

6. (a) (i) Material price variance:

= (Standard price – Actual Price) × Actual quantity

= (Rs. 4 – Rs. 4.10) × 5,000 = Rs. 500 Adv.

(ii) Material usage variance:

= (Std. quantity for actual output – Actual qtty.) × Std. price

= (600 × 5 – 3,500) × 4 = Rs. 2,000 Adv.

(iii) Labour Rate Variance:

= (Standard rate – Actual rate) × Actual hours

= (Rs.10 – Rs.9) × 1,700 = Rs. 1,700 Fav.

(iv) Labour Efficiency Variance:

= (Standard hours for actual output – Actual hours) × Standard rate

= (600 × 3 – 1,700) × Rs.10

= Rs. 1,000 Fav.

(v) Variable Overhead Expenditure Variance

= (Actual Hours × Standard Rate) – Actual Overhead

= (1,700 × Rs. 1) – Rs. 1,900

= Rs. 200 Adv.

(vi) Variable Overhead Efficiency Variance:

= (Std. hours for actual output – Actual hours) × Std. rate

= (600 × 3 – 1,700) × Rs.1 = Rs.100 Fav.

(vii) Fixed Overhead Expenditure Variance:

= (Budgeted overhead – Actual overhead)

= (1,800 × 0.50 – 900) = Nil

(viii) Fixed Overhead Volume Variance:

= (Std. hours for actual output – Budgeted hours) × Std. rate

= (600 × 3 – 1,800) × Rs. 0.50 = Nil

(b) (i) Computation of Weighted Average Cost of Capital based on existing capital structure

Source of Capital	Existing Capital structure (Rs.)	Weights (a)	After tax cost of capital (%) (b)	WACC (%) (a) × (b)
Equity share capital (W.N.1)	3,00,00,000	0.652	10.00	6.52
11.5% Preference share capital	60,00,000	0.130	11.50	1.50
10% Debentures (W.N.2)	1,00,00,000	0.218	6.50	1.42
Total	4,60,00,000	1.000		9.44

Working Notes:

1. Cost of Equity Capital:

$$K_e = \frac{\text{Expected dividend } (D_1)}{\text{Current Market Price } (P_0)} + \text{Growth}(g)$$

$$= \frac{\text{Rs. } 15}{\text{Rs. } 300} + 0.05$$

= 10%

2. Cost of 10% Debentures

$$K_d = \frac{\text{Interest } (1 - t)}{\text{Net proceeds}}$$

$$= \frac{\text{Rs. } 10,00,000\ (1 - 0.35)}{\text{Rs. } 1,00,000}$$

= 0.065 or 6.5%

(ii) Computation of Weighted Average Cost of Capital based on new capital structure

Source of Capital	New Capital structure (Rs.)	Weights (a)	After tax cost of capital (%) (b)	WACC (%) (a) x (b)
Equity share capital (W.N.3)	3,00,00,000	0.588	13.00	7.64
11.5% Preference share capital	60,00,000	0.118	11.50	1.36
10% Debentures (W.N.2)	1,00,00,000	0.196	6.50	1.27
12% Debentures (W.N.4)	50,00,000	0.098	7.80	0.76
Total	5,10,00,000	1.000		11.03

Working Notes:

3. Cost of Equity Capital:

$$K_e = \frac{\text{Rs. } 20}{\text{Rs. } 250} + 0.05$$

= 13%

4. Cost of 12% Debentures

$$K_d = \frac{\text{Rs. } 6,00,000\ (1 - 0.35)}{\text{Rs. } 50,00,000}$$

= 0.078 or 7.8%

7. (a) Differences between Job costing and Batch costing:

Sr. No	Job Costing	Batch Costing
1	Method of costing used for non- standard and non- repetitive products produced as per customer specifications and against	Homogeneous products produced in a continuous production flow in lots.

	specific orders.	
2	Cost determined for each Job.	Cost determined in aggregate for the entire Batch and then arrived at on per unit basis.
3	Jobs are different from each other and independent of each other. Each Job is unique.	Products produced in a batch are homogeneous and lack of individuality.

(b) Difference between Fixed and Flexible Budgets

	Fixed Budget	Flexible Budget
1.	It does not change with actual volume of activity achieved. Thus it is rigid	It can be re-casted on the basis of activity level to be achieved. Thus it is not rigid.
2.	It operates on one level of activity and under one set of conditions	It consists of various budgets for different level of activity.
3.	If the budgeted and actual activity levels differ significantly, then cost ascertainment and price fixation do not give a correct picture.	It facilitates the cost ascertainment and price fixation at different levels of activity.
4.	Comparisons of actual and budgeted targets are meaningless particularly when there is difference between two levels.	It provided meaningful basis of comparison of actual and budgeted targets.

(c) Some of the factors which need to be considered while planning for working capital requirement are-

(i) Cash: Identify the cash balance which allows for the business to meet day- to-day expenses, but reduces cash holding costs.

(ii) Inventory: Identify the level of inventory which allows for uninterrupted production but reduces the investment in raw materials and hence increases cash flow; the techniques like Just in Time (JIT) and Economic order quantity (EOQ) are used for this.

(iii) Receivables: Identify the appropriate credit policy, i.e., credit terms which will attract customers, such that any impact on cash flows and the cash conversion cycle will be offset by increased revenue and hence Return on Capital (or vice versa). The tools like Discounts and allowances are used for this.

(iv) Short-term Financing Options: Inventory is ideally financed by credit granted by the supplier; dependent on the cash conversion cycle, it may however, be necessary to utilize a bank loan (or overdraft), or to "convert debtors to cash" through "factoring" inorder to finance working capital requirements.

(v) Nature of Business: For e.g. in a business of restaurant, most of the sales are in Cash. Therefore, need for working capital is very less.

(vi) Market and Demand Conditions: For e.g. if an item's demand far exceeds its production, the working capital requirement would be less as investment in finished goods inventory would be very less.

(vii) Technology and Manufacturing Policies: For e.g. in some businesses the demand for goods is seasonal, in that case a business may follow a policy for steady production through out over the whole year or instead may choose policy of production only during the demand season.

(viii) Operating Efficiency: A company can reduce the working capital requirement by eliminating waste, improving coordination etc.

(ix) Price Level Changes: For e.g. rising prices necessitate the use of more funds for maintaining an existing level of activity. For the same level of current assets, higher cash outlays are required. Therefore, the effect of rising prices is that a higher amount of working capital is required.

(d) Present Value: Present Value" is the current value of a "Future Amount". It can also be defined as the amount to be invested today (Present Value) at a given rate over specified period to equal the "Future Amount".

Perpetuity: Perpetuity is an annuity in which the periodic payments or receipts begin on a fixed date and continue indefinitely or perpetually. Fixed coupon payments on permanently invested (irredeemable) sums of money are prime examples of perpetuities.

(e) (i) Cost of Availing Trade Credit: Normally it is considered that the trade credit does not carry any cost. However, it carries the following costs-

(I) Price: There is often a discount on the price that the firm undergoes when it uses trade credit, since it can take advantage of the discount only if it pays immediately. This discount can translate into a high implicit cost.

(II) Loss of goodwill: If the credit is overstepped, suppliers may discriminate against delinquent customers if supplies become short. As with the effect of any loss of goodwill, it depends very much on the relative market strengths of the parties involved.

(III) Cost of managing: Management of creditors involves administrative and accounting costs that would otherwise be incurred.

(IV) Conditions: Sometimes most of the suppliers insist that for availing the credit facility the order should be of some minimum size or even on regular basis.

(ii) Cost classification based on controllability:

(I) Controllable Costs - Cost that can be controlled, typically by a cost, profit or investment centre manager is called controllable cost. Controllable costs incurred in a particular responsibility centre can be influenced by the action of the executive heading that responsibility centre. For example, direct costs comprising direct labour, direct material, direct expenses and some of the overheads are generally controllable by the shop level management.

(II) Uncontrollable Costs - Costs which cannot be influenced by the action of a specified member of an undertaking are known as uncontrollable costs. For example, expenditure incurred by, say, the tool room is controllable by the foreman in-charge of that section but the share of the tool-room expenditure which is apportioned to a machine shop is not to be controlled by the machine shop foreman.