MOCK TEST PAPER – II

INTERMEDIATE (IPC): GROUP – I

PAPER – 3: COST ACCOUNTING AND FINANCIAL MANAGEMENT

SUGGESTED ANSWERS/HINTS

1. (a) Working notes:

1. (i) Number of units sold at 80% capacity

$$= \frac{\text{Turnover}}{\text{Selling price p.u.}} = \frac{\text{Rs. } 8,00,000}{\text{Rs. } 25} = 32{,}000 \text{ units.}$$

(ii) Number of units sold at 100% capacity

$$\frac{\text{Rs. } 32{,}000 \text{ units}}{80} \times 100 = 40{,}000 \text{ units}$$

2. Component of fixed cost included in semi-variable cost of 32,000 units.

Fixed cost = {Total semi-variable cost – Total variable cost}

= Rs.1,80,000 – 32,000 units × Rs.3.75

= Rs.1,80,000 – Rs.1,20,000

= Rs.60,000

3. (i) Total fixed cost at 80% capacity

= Fixed cost + Component of fixed cost included in semi—variable cost *(Refer to working note 2)*

= Rs.90,000 + Rs.60,000 = Rs.1,50,000

(ii) **Total fixed cost beyond 80% capacity**

= Total fixed cost at 80% capacity + Additional fixed cost to be incurred

= Rs.1,50,000 + Rs.20,000 = Rs.1,70,000

4. **Variable cost and contribution per unit**

Variable cost per unit = Material cost + Labour cost + Variable cost component in semi variable cost = Rs.7.50 + Rs.6.25 + Rs.3.75 = Rs.17.50

Contribution per unit = Selling price per unit – Variable cost per unit

= Rs.25 – Rs.17.50 = Rs.7.50

5. **Profit at 80% capacity level**

= Sales revenue – Variable cost – Fixed cost

= Rs.8,00,000 – Rs.5,60,000 (32,000 units × Rs.17.50) – Rs.1,50,000

= Rs.90,000

(i) Activity level at Break–Even Point

$$\text{Break-even point (units)} = \frac{\text{Fixed cost}}{\text{Contribution per unit}} = \frac{\text{Rs. } 1,50,000}{\text{Rs. } 7.50} = 20{,}000 \text{ units}$$

(Refer to working notes 3 & 4)

$$\text{Activity level at BEP} = \frac{\text{Break - Even point (units)}}{\text{No. of units at 100\% capacity level}} \times 100$$

(Refer to working note 1(ii))

$$= \frac{20,000 \text{ units}}{40,000 \text{ units}} \times 100 = 50\%$$

(ii) Number of units to be sold to earn a net income of 8% of sales

Let S be the number of units sold to earn a net income of 8% of sales.

Mathematically it means that : (Sales revenue of S units)

= Variable cost of S × units + Fixed cost + Net income

Or, Rs.25S = Rs.17.5S + Rs.1,50,000 + $\frac{8}{100}$ × (Rs.25S)

Or, Rs.25S = Rs.17.5S + Rs.1,50,000 + Rs.2S

Or, S = (Rs.1,50,000/Rs.5.5) units

Or, S = 27,273 units.

(iii) Activity level needed to earn a profit of Rs. 95,000

The profit at 80% capacity level, is Rs. 90,000 which is less than the desired profit of Rs. 95,000, therefore the needed activity level would be more than 80%. Thus the fixed cost to be taken to determine the activity level needed should be Rs.1,70,000 *(Refer to Working Note 3 (ii))*

Units to be sold to earn a profit of Rs.95,000

$$= \frac{\text{Fixed cost + Desired profit}}{\text{Contribution per unit}}$$

$$= \frac{\text{Rs.}1,70,000 + \text{Rs.}95,000}{\text{Rs.}7.5}$$

= 35,333.33 units

Activity level needed to earn a profit of Rs.95,000

$$= \frac{35,333.33 \text{ units}}{40,000 \text{ units}} \times 100 = 88.33\%$$

(b) (i) Variable overhead absorption rate: $= \frac{\text{Difference in Total Overheads}}{\text{Difference in levels in terms of machine hours}}$

$$= \frac{\text{Rs.}3,47,625 - \text{Rs.}3,38,875}{15,500 \text{ hours} - 14,500 \text{ hours}} = \text{Rs.}8.75 \text{ per machine hour.}$$

(ii) Calculation of Total fixed overheads:

	(Rs.)
Total overheads at 14,500 hours	3,38,875
Less: Variable overheads (Rs. 8.75 × 14,500)	(1,26,875)
Total fixed overheads	2,12,000

(iii) Calculation of Budgeted level of activity in machine hours:

Let budgeted level of activity = X

$$\text{Then, } \frac{(\text{Rs. } 8.75X + \text{Rs. } 2,12,000)}{X} = \text{Rs. } 22$$

$8.75X + \text{Rs.}2,12,000 = 22X$

$13.25X = 2,12,000$

$X = 16,000$

Thus, budgeted level of activity = 16,000 machine hours.

(iv) Calculation of Under / Over absorption of overheads:

	(Rs.)
Actual overheads	3,22,000
Absorbed overheads (14,970 hours × Rs. 22 per hour)	3,29,340
Over-absorption (3,29,340 – 3,22,000)	7,340

(v) Departmental absorption rates provide costs which are more precise than those provided by the use of blanket absorption rates. Departmental absorption rates facilitate variance analysis and cost control. The applications of these rates make the task of stock and work-in-process (WIP) valuation easier and more precise. However, the setting up and monitoring of these rates can be time consuming and expensive.

(c) Working notes:

(i) Current assets and Current liabilities computation:

$$\frac{\text{Current assets}}{\text{Current liabilities}} = \frac{2.5}{1}$$

$$\text{Or, } \frac{\text{Current Assets}}{2.5} = \frac{\text{Current Liabilities}}{1} = k \text{ (say)}$$

Or, Current Assets = 2.5 k and Current Liabilities = k

Or, Working capital = (Current Assets – Current Liabilities)

Or, Rs. 2,40,000 = k (2.5 – 1) = 1.5 k

Or, k = Rs.1,60,000

∴ Current Liabilities = Rs. 1,60,000

Current Assets = Rs.1,60,000 × 2.5 = Rs. 4,00,000

(ii) Computation of stock

$$\text{Liquid ratio} = \frac{\text{Liquid assets}}{\text{Current liabilities}}$$

$$\text{Or, } 1.5 = \frac{\text{Current Assets - Stock}}{\text{Rs.}1,60,000}$$

Or, 1.5 × Rs.1,60,000 = Rs.4,00,000 – Stock

Or, Stock = Rs.1,60,000

(iii) Computation of Proprietary fund; Fixed assets; Capital and Sundry creditors

Proprietary ratio = $\frac{\text{Fixed assets}}{\text{Proprietary fund}} = 0.75$

$\therefore$ Fixed assets = 0.75 Proprietary fund

and Net working capital = 0.25 Proprietary fund

Or, Rs. 2,40,000/0.25 = Proprietary fund

Or, Proprietary fund = Rs.9,60,000

and Fixed assets = 0.75 proprietary fund

= 0.75 × Rs. 9,60,000

= Rs.7,20,000

Capital = Proprietary fund – Reserves & Surplus

= Rs.9,60,000 – Rs.1,60,000

= Rs.8,00,000

Sundry creditors = (Current liabilities – Bank overdraft)

= (Rs.1,60,000 – Rs.40,000) = Rs.1,20,000

Balance Sheet

Liabilities	(Rs.)	Assets	(Rs.)
Capital	8,00,000	Fixed assets	7,20,000
Reserves & Surplus	1,60,000	Stock	1,60,000
Bank overdraft	40,000	Current assets	2,40,000
Sundry creditors	1,20,000		
	11,20,000		11,20,000

(d) Equated Monthly Installment (EMI) = $P \times r \times \frac{(1+r)^n}{(1+r)^n - 1}$

Where, P = Rs.3,00,000

r = 0.18/12 = 0.015

n = 1 × 12 = 12

EMI = Rs.3,00,000 × 0.015 × $\frac{(1+0.015)^{12}}{(1+0.015)^{12}-1}$ = Rs. 4,500 × $\frac{1.1956}{0.1956}$ = Rs. 27,504

Calculation of Total Interest to be paid upto the end of sixth month

End of month	Opening Balance (Rs.)	Payment (Rs.)	Interest (Rs.)	Principle Repayment (Rs.)	Outstanding at the end (Rs.)
	A	B = EMI	C = A × 0.015	D = B -C	E = A - D
1	3,00,000	27,504	4,500	23,004	2,76,996
2	2,76,996	27,504	4,155	23,349	2,53,647
3	2,53,647	27,504	3,805	23,699	2,29,948
4	2,29,948	27,504	3,449	24,055	2,05,893

5	2,05,893	27,504	3,088	24,416	1,81,477
6	1,81,477	27,504	2,722	24,782	1,56,695
			21,719		

Total interest upto the end of sixth month will be Rs.21,719

2. (a) (i) Material Price Variance = Actual Quantity (Std. Price – Actual Price)

Limestone	=	$340\left(Rs.565-\frac{Rs.1,90,400}{340}\right)$	
	=	340 (Rs. 565 - Rs. 560)	= 1,700 (F)
Silica	=	$105\left(Rs.4,800-\frac{Rs.5,09,250}{105}\right)$	
	=	105 (Rs. 4,800 - Rs. 4,850)	= 5,250 (A)
Alumina	=	$25\left(Rs.32,100-\frac{Rs.8,12,500}{25}\right)$	
	=	25 (Rs. 32,100 - Rs. 32,500)	= 10,000 (A)
Iron ore	=	$30\left(Rs.1,800-\frac{Rs.53,400}{30}\right)$	
	=	30 (Rs. 1,800 - Rs. 1,780)	= 600 (F)
Others	=	$23\left(Rs.2,400-\frac{Rs.51,750}{23}\right)$	
	=	23 (Rs. 2,400 - Rs. 2,250)	= 3,450 (F)
			9,500 (A)

(ii) Material Mix Variance = Std. Price (Revised Std. Quantity – Actual Quantity)

Limestone	=	Rs. 565 (523 × 65% - 340)	
	=	Rs. 565 (339.95 - 340)	= 28.25 (A)
Silica	=	Rs. 4,800 (523 × 20% - 105)	
	=	Rs. 4,800 (104.6 - 105)	= 1,920 (A)
Alumina	=	Rs. 32,100 (523 × 5% - 25)	
	=	Rs. 32,100 (26.15 - 25)	= 36,915 (F)
Iron ore	=	Rs. 1,800 (523 × 5% - 30)	
	=	Rs. 1,800 (26.15 - 30)	= 6,930 (A)
Others	=	Rs. 2,400 (523 × 5% - 23)	
	=	Rs. 2,400 (26.15 - 23)	= 7,560 (F)
			35,596.75 (F)

(iii) Material Yield Variance = Std. Price (Standard Quantity – Revised Std. Quantity)

Limestone	=	Rs. 565 (500 × 65% - 523 × 65%)	
	=	Rs. 565 (325 - 339.95)	= 8,446.75 (A)
Silica	=	Rs. 4,800 (500 × 20% - 523 × 20%)	
	=	Rs. 4,800 (100 - 104.6)	= 22,080 (A)

Alumina	=	Rs. 32,100 (500 × 5% - 523 × 5%)	
	=	Rs. 32,100 (25 - 26.15)	= 36,915 (A)
Iron ore	=	Rs. 1,800 (500 × 5% - 523 × 5%)	
	=	Rs. 1,800 (25 - 26.15)	= 2,070 (A)
Others	=	Rs. 2,400 (500 × 5% - 523 × 5%)	
	=	Rs. 2,400 (25 - 26.15)	= 2,760 (A)
			72,271.75 (A)

(iv) Material Cost Variance = (Std. Quantity × Std. Price) – (Actual Quantity × Actual Price)

Limestone	=	Rs. 565 × (500 × 65%) - Rs. 1,90,400	
	=	Rs. 1,83,625 - Rs. 1,90,400	= 6,775 (A)
Silica	=	Rs. 4,800 × (500 × 20%) - Rs. 5,09,250	
	=	Rs. 4,80,000 – Rs. 5,09,250	= 29,250 (A)
Alumina	=	Rs. 32,100 (500 × 5%) – Rs. 8,12,500	
	=	Rs. 8,02,500 – Rs. 8,12,500	= 10,000 (A)
Iron ore	=	Rs. 1,800 (500 × 5%) – Rs. 53,400	
	=	Rs. 45,000 – Rs. 53,400	= 8,400 (A)
Others	=	Rs. 2,400 (500 × 5%) – Rs. 51,750	
	=	Rs. 60,000 – Rs. 51,750	= 8,250 (F)
			46,175 (A)

(b) (i) Estimate of the Requirement of Working Capital

		(Rs.)	(Rs.)
A.	**Current Assets:**		
	Raw material stock (Refer to Working note 3)	6,64,615	
	Work in progress stock (Refer to Working note 2)	5,00,000	
	Finished goods stock (Refer to Working note 4)	13,60,000	
	Debtors (Refer to Working note 5)	29,53,846	
	Cash and Bank balance	25,000	55,03,461
B.	**Current Liabilities**:		
	Creditors for raw materials (Refer to Working note 6)	7,15,740	
	Creditors for wages (Refer to Working note 7)	91,731	8,07,471
	Net Working Capital (A - B)		46,95,990

Working Notes:

1. Annual cost of production

	Rs.
Raw material requirements (1,04,000 units × Rs. 80)	83,20,000
Direct wages (1,04,000 units × Rs. 30)	31,20,000
Overheads (exclusive of depreciation)(1,04,000 × Rs. 60)	62,40,000
	1,76,80,000

2. Work in progress stock

	Rs.
Raw material requirements (4,000 units × Rs. 80)	3,20,000
Direct wages (50% × 4,000 units × Rs. 30)	60,000
Overheads (50% × 4,000 units × Rs. 60)	1,20,000
	5,00,000

3. Raw material stock

It is given that raw material in stock is average 4 weeks 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 (52 weeks) is as follows:

	Rs.
For Finished goods	83,20,000
For Work in progress	3,20,000
	86,40,000

Raw material stock $\frac{\text{Rs. } 86,40,000}{52 \text{ weeks}} \times 4 \text{ weeks}$ i.e. Rs. 6,64,615

4. Finished goods stock

8,000 units @ Rs. 170 per unit = Rs. 13,60,000

5. Debtors for sale

Credit allowed to debtors	Average 8 weeks
Credit sales for year (52 weeks) i.e. (1,04,000 units - 8,000 units)	96,000 units
Selling price per unit	Rs. 200
Credit sales for the year (96,000 units × Rs. 200)	Rs. 1,92,00,000

Debtors $\frac{\text{Rs. } 1,92,00,000}{52 \text{ weeks}} \times 8 \text{ weeks}$ i.e. Rs. 29,53,846

(Debtor can also be calculated based on Cost of goods sold)

6. Creditors for raw material:

Credit allowed by suppliers	Average 4 weeks
Purchases during the year (52 weeks) i.e. (Rs. 83,20,000 + Rs. 3,20,000 + Rs. 6,64,615) (Refer to Working notes 1,2 and 3 above)	Rs. 93,04,615

Creditors $\frac{\text{Rs. } 93,04,615}{52 \text{ weeks}} \times 4 \text{ weeks}$ i.e. Rs. 7,15,740

7. Creditors for wages

Lag in payment of wages — Average $1\frac{1}{2}$ weeks

Direct wages for the year (52 weeks) i.e. (Rs. 31,20,000 + Rs. 60,000) — Rs. 31,80,000

(Refer to Working notes 1 and 2 above)

Creditors $\frac{₹31,80,000}{52 \text{ weeks}} \times 1\frac{1}{2} \text{ weeks}$ i.e. Rs. 91,731

3. (a) (i) Statement of Equivalent Production (FIFO Method)

Input		Output		Equivalent Production					
				Materials		Labour		Production Overhead	
Details	Units	Details	Units	%	Units	%	Units	%	Units
Opening Stock	600	From opening stock	600	-	-	40	240	40	240
		- From fresh materials	8,300	100	8,300	100	8,300	100	8,300
		Closing W-I-P	700	100	700	70	490	70	490
Fresh inputs	9,200	Normal loss	392	-	-	-	-	-	-
			9,992		9,000		9,030		9,030
		Less: Abnormal Gain	(192)	100	(192)	100	(192)	100	(192)
	9,800		9,800		8,808		8,838		8,838

(ii) Statement of Cost per equivalent units

Elements	(Rs.)	Cost (Rs.)	Equivalent units (EU)	Cost per EU (Rs.)
Material Cost	55,20,000			
Less: Scrap realisation 392 units @ Rs. 60/- p.u.	(2,3520)	54,96,480	8,808	624.03
Labour cost		18,60,000	8,838	210.45
Production OH Cost		8,63,000	8,838	97.65
Total Cost		82,19,480		932.13

(iii) Cost of Abnormal Gain – 192 Units

	(Rs.)	(Rs.)
Material cost of 192 units @ Rs. 624.03 p.u.	1,19,813.76	
Labour cost of 192 units @ Rs. 210.45 p.u.	40,406.40	
Production OH cost of 192 units @ Rs. 97.65 p.u.	18,748.80	1,78,968.96

Cost of closing WIP – 700 Units		
Material cost of 700 equivalent units @ Rs. 624.03 p.u.	4,36,821.00	
Labour cost of 490 equivalent units @ Rs. 210.45 p.u.	1,03,120.50	
Production OH cost of 490 equivalent @ Rs. 97.65 p.u.	47,848.50	5,87,790.00

Cost of 8,900 units transferred to next process

(i)	Cost of opening W-I-P Stock b/f – 600 units	4,20,000.00
(ii)	Cost incurred on opening W-I-P stock	
	Material cost	—
	Labour cost 240 equivalent units @ Rs. 210.45 p.u.	50,508.00
	Production OH cost 240 equivalent units @ Rs 97.65 p.u.	23,436.00
		4,93,944.00
(iii)	Cost of 8,300 completed units	
	8,300 units @ Rs. 932.13 p.u.	77,36,679.00
	Total cost [(i) + (ii) + (iii))]	86,50,623.00

(b) (1) Computation of Net Present Values of Projects

Year	*Cash flows*		*Disct. factor @ 16 %*	*Discounted Cash flow*	
	Project A (Rs.)	*Project B (Rs.)*		*Project A (Rs.)*	*Project B (Rs.)*
	(1)	*(2)*	*(3)*	*(3) × (1)*	*(3) × (2)*
0	(1,35,000)	(2,40,000)	1.000	(1,35,000)	(2,40,000)
1	--	60,000	0.862	--	51,720
2	30,000	84,000	0.743	22,290	62,412
3	1,32,000	96,000	0.641	84,612	61,536
4	84,000	1,02,000	0.552	46,368	56,304
5	84,000	90,000	0.476	39,984	42,840
Net present value				58,254	34,812

(2) Computation of Cumulative Present Values of Projects Cash inflows

Year	*Project A*		*Project B*	
	PV of cash inflows (Rs.)	*Cumulative PV (Rs.)*	*PV of cash inflows (Rs.)*	*Cumulative PV (Rs.)*
1	--	--	51,720	51,720
2	22,290	22,290	62,412	1,14,132
3	84,612	1,06,902	61,536	1,75,668
4	46,368	1,53,270	56,304	2,31,972
5	39,984	1,93,254	42,840	2,74,812

(i) Discounted payback period: *(Refer to Working note 2)*

Cost of Project A = Rs.1,35,000

Cost of Project B = Rs. 2,40,000

Cumulative PV of cash inflows of Project A after 4 years = Rs. 1,53,270

Cumulative PV of cash inflows of Project B after 5 years = Rs. 2,74,812

A comparison of projects cost with their cumulative PV clearly shows that the project A's cost will be recovered in less than 4 years and that of project B in less than 5 years. The exact duration of discounted payback period can be computed as follows:

	Project A	Project B
Excess PV of cash inflows over the project cost (Rs.)	18,270 (Rs.1,53,270 – Rs. 1,35,000)	34,812 (Rs. 2,74,812 – Rs. 2,40,000)
Computation of period required to recover excess amount of cumulative PV over project cost (Refer to Working note 2)	0.39 year (Rs. 18,270 ÷Rs. 46,368)	0.81 years (Rs. 34,812 ÷ Rs. 42,840)
Discounted payback period	3.61 year (4 – 0.39) years	4.19 years (5 – 0.81) years

(ii) Profitability Index: $= \frac{\text{Sum of discounted cash inflows}}{\text{Initian cash outlay}}$

Profitability Index (for Project A) $= \frac{\text{Rs.1,93,254}}{\text{Rs.1,35,000}} = 1.43$

Profitability Index (for Project B) $= \frac{\text{Rs.2,74,812}}{\text{Rs.2,40,000}} = 1.15$

(iii) Net present value *(for Project A)* = Rs. 58,254 *(Refer to Working note 1)*

Net present value *(for Project B)* = Rs. 34,812

4. (a) (i) Preparation of Production Budget (in units)

	October	November	December	January
Demand for the month (Nos.)	40,000	35,000	45,000	60,000
Add: 20% of next month's demand	7,000	9,000	12,000	13,000
Less: Opening Stock	(9,500)	(7,000)	(9,000)	(12,000)
Vehicles to be produced	37,500	37,000	48,000	61,000

(ii) Preparation of Purchase budget for Part-X

	October	November	December
Production for the month (Nos.)	37,500	37,000	48,000
Add: 40% of next month's production	14,800 (40% of 37,000)	19,200 (40% of 48,000)	24,400 (40% of 61,000)
	52,300	56,200	72,400
No. of units required for production	2,09,200 (52300 × 4 units)	2,24,800 (56200 × 4 units)	2,89,600 (72,400 × 4 units)
Less: Opening Stock	(48,000)	(59,200) (14800 × 4 units)	(76,800) (19200 × 4 units)
No. of units to be purchased	1,61,200	1,65,600	2,12,800

(iii) Budgeted Gross Profit for the Quarter October to December

	October	November	December	Total
Sales in nos.	40,000	35,000	45,000	1,20,000
Net Selling Price per unit*	7,28,535	7,28,535	7,28,535	
Sales Revenue (Rs. in lakh)	2,91,414	2,54,987.25	3,27,840.75	8,74,242
Less: Cost of Sales (Rs. in lakh) (Sales unit × Cost per unit)	2,28,560	1,99,990.00	2,57,130.00	6,85,680
Gross Profit (Rs. in lakh)	62,854	54,997.25	70,710.75	1,88,562

* Net Selling price unit = Rs. 8,57,100 – 15% commission on Rs. 8,57,100 = Rs.7,28,535.

(b) Calculation of Earnings per share for three alternatives to finance the project

Particulars	Alternatives		
	I To raise debt of Rs. 2,50,000 and equity of Rs. 22,50,000	II To raise debt of Rs. 10,00,000 and equity of Rs.15,00,000	III To raise debt of Rs.15,00,000 and equity of Rs. 10,00,000
	(Rs.)	(Rs.)	(Rs.)
Earnings before interest and tax	5,00,000	5,00,000	5,00,000
Less: Interest on debt at the rate of	25,000 (10% on Rs.2,50,000)	1,37,500 (10% on Rs.2,50,000) (15% on Rs. 7,50,000)	2,37,500 (10% on Rs. 2,50,000) (15% on Rs.7,50,000) (20% on Rs.5,00,000)
Earnings before tax	4,75,000	3,62,500	2,62,500
Less: Tax @ 50%	2,37,500	1,81,250	1,31,250
Earnings after tax: (A)	2,37,500	1,81,250	1,31,250
Number of shares: (B) (Equity/ Market price of Share)	15,000 (Rs.22,50,000/Rs.150)	10,000 (Rs.15,00,000/Rs.150)	8,000 (Rs.10,00,000/Rs.125)
Earnings per share: [(A)/(B)]	15.833	18.125	16.406

The company should raise Rs.10,00,000 from debt and Rs.15,00,000 by issuing equity shares, as it gives highest EPS.

5. (a) Accounting treatment of idle time wages & overtime wages in cost accounts: Normal idle time is treated as a part of the cost of production. Thus, in the case of direct workers, an allowance for normal idle time is built into the labour cost rates. In the case of indirect workers, normal idle time is spread over all the products or jobs through the process of absorption of factory overheads.

Under Cost Accounting, the overtime premium is treated as follows:

If overtime is resorted to at the desire of the customer, then the overtime premium may be charged to the job directly.

If overtime is required to cope with general production program or for meeting urgent orders, the overtime premium should be treated as overhead cost of particular department or cost center which works overtime.

Overtime worked on account of abnormal conditions should be charged to costing Profit & Loss Account.

If overtime is worked in a department due to the fault of another department the overtime premium should be charged to the latter department.

(b) Essential pre-requisites of Integrated Accounting System: The essential pre-requisites of Integrated Accounting System include the following:

The management's decision about the extent of integration of the two sets of books. Some concerns find it useful to integrate upto the stage of primary cost or factory cost while other prefer full integration of the entire accounting records.

A suitable coding system must be made available so as to serve the accounting purposes of financial and cost accounts.

An agreed routine, with regard to the treatment of provision for accruals, prepaid expenses, other adjustment necessary for preparation of interim accounts.

Perfect coordination should exist between the staff responsible for the financial and cost aspects of the accounts and an efficient processing of accounting documents should be ensured.

Under this system there is no need for a separate cost ledger. Of course, there will be a number of subsidiary ledgers; in addition to the useful Customers Ledger and the Bought Ledger, there will be: (a) Stores Ledger; (b) Finished Stock Ledger and (c) W-I-P Ledger.

(c) Trade credit and accruals as source of working capital refers to credit facility given by suppliers of goods during the normal course of trade. It is a short term source of finance. SSI firms in particular are heavily dependent on this source for financing their working capital needs. The major advantages of trade credit are – easy availability, flexibility and informality.

There can be an argument that trade credit is a cost free source of finance. But it is not. It involves implicit cost. The supplier extending trade credit incurs cost in the form of opportunity cost of funds invested in trade receivables. Generally, the supplier passes on these costs to the buyer by increasing the price of the goods or alternatively by not extending cash discount facility.

(d) Bridge finance refers, normally, to loans taken by the business, usually from commercial banks for a short period, pending disbursement of term loans by financial institutions, normally it takes time for the financial institution to finalise procedures of creation of security, tie-up participation with other institutions etc. even though a positive appraisal of the project has been made. However, once the loans are approved in principle, firms in order not to lose further time in starting their projects arrange for bridge finance. Such temporary loan is normally repaid out of the proceeds of the principal term loans. It is secured by hypothecation of moveable assets, personal guarantees and demand promissory notes. Generally rate of interest on bridge finance is higher as compared with that on term loans.

6. (a) School Contract Account

Particulars	Amount (Rs.)	Particulars	Amount (Rs.)
To Plant	2,40,000	By Material returned	47,000
To Hire of plant	77,000	By Plant c/d	1,65,000
To Materials	6,62,000	By Materials c/d	50,000
To Direct wages 9,60,000		By WIP c/d:	
Add: Accrued 40,000	10,00,000	Value of work certified	24,00,000
To Wages related costs	1,32,000	Cost of work not certified	1,80,000
To Direct expenses	34,000		

To Supervisory staff: Direct 90,000			
Indirect 20,000	1,10,000		
To Regional office expenses	50,000		
To Head office expenses	30,000		
To Surveyors' fees	27,000		
To Notional profit c/d	4,80,000		
	28,42,000		28,42,000
To Cost P&L A/c	2,40,000	By Notional Profit b/d	4,80,000
To WIP (reserve) c/d	2,40,000		
	4,80,000		4,80,000

Working Note:

(i) Calculation of percentage of work completion: $\frac{Rs.24,00,000}{Rs.30,00,000} \times 100 = 80\%$

(ii) Calculation of profit attributable to the contact:

$\frac{2}{3} \times Rs.4,80,000 \times \frac{Rs.18,00,000}{Rs.24,00,000} = Rs.\ 2,40,000$

(b) Working Notes:

Company X

Financial leverage = $\frac{EBIT}{EBT} = \frac{3}{1}$ = Or, EBIT = 3 × EBT ……. (1)

Again EBIT – Interest = EBT

Or, EBIT - 200 = EBT ……..(2)

Taking (1) and (2) we get

3 EBT - 200 = EBT

Or, 2 EBT = 200 or EBT = Rs.100

Hence EBIT = 3EBT = Rs.300

Again we have operating leverage = $\frac{Contribution}{EBIT} = \frac{4}{1}$

EBIT = Rs. 300, hence we get

Contribution = 4 × EBIT = Rs.1,200

Now variable cost = $66\frac{2}{3}\%$ on sales

Contribution = 100- $66\frac{2}{3}\%$ i.e. $33\frac{1}{3}\%$ on sales

Hence sales = $\frac{1200}{33\frac{1}{3}\%}$ = Rs. 3,600

Same way EBIT, EBT, contribution and sales for company B can be worked out.

Company Y

Financial leverage = $\frac{EBIT}{EBT} = \frac{4}{1}$ or EBIT = 4 EBT .....(3)

Again EBIT – Interest = EBT or EBIT – 300 = EBT .....(4)

Taking (3) and (4) we get, 4 EBT - 300 = EBT

Or, 3 EBT = 300 Or, EBT = 100

Hence, EBIT = 4 × EBT = 400

Again we have operating leverage = $\frac{Contribution}{EBIT} = \frac{5}{1}$

EBIT = 400; Hence we get contribution = 5 × EBIT = 2,000

Now variable cost = 75% on sales

Contribution = 100 - 75% i.e. 25% on sales

Hence Sales = $\frac{2,000}{25\%}$ = Rs. 8,000

Income Statement

	X (Rs.)	Y (Rs.)
Sales	3,600	8,000
Less: Variable Cost	2,400	6,000
Contribution	1200	2,000
Less: Fixed Cost (bal. Fig)	900	1,600
EBIT	300	400
Less: Interest	200	300
EBT	100	100
Less: Tax 45%	45	45
EAT	55	55

7. (a) The main points which distinguish Job Costing and Process Costing are as below:

	Job Costing	**Process Costing**
(i)	A Job is carried out or a product is produced by specific orders.	The process of producing the product has a continuous flow and the product produced is homogeneous.
(ii)	Costs are determined for each job.	Costs are compiled on time basis i.e., for production of a given accounting period for each process or department.
(iii)	Each job is separate and independent of other jobs.	Products lose their individual identity as they are manufactured in a continuous flow.
(iv)	Each job or order has a number and costs are collected against the same job number.	The unit cost of process is an average cost for the period.
(v)	Costs are computed when a job is completed. The cost of a job may be	Costs are calculated at the end of the cost period. The unit cost of a process may be computed by

	determined by adding all costs against the job.	dividing the total cost for the period by the output of the process during that period.
(vi)	As production is not continuous and each job may be different, so more managerial attention is required for effective control.	Process of production is usually standardized and is therefore, quite stable. Hence control here is comparatively easier.

(b) **Product costs** are those costs that are identified with the goods purchased or produced for resale. In a manufacturing organisation they are attached to the product and that are included in the inventory valuation for finished goods, or for incomplete goods. Product cost is also known as inventoriable cost. Under absorption costing method it includes direct material, direct labour, direct expenses, directly attributable costs (variable and non-variable) and other production (manufacturing) overheads. Under marginal costing method Product Costs includes all variable production costs and the all fixed costs are deducted from the contribution.

Periods costs are the costs, which are not assigned to the products but are charged as expense against revenue of the period in which they are incurred. General Administration, marketing, sales and distributor overheads are recognized as period costs.

(c) Time value of money means that worth of a rupee received today is different from the worth of a rupee to be received in future. The preference of money now as compared to future money is known as time preference for money.

A rupee today is more valuable than rupee after a year due to several reasons:

- Risk – there is uncertainty about the receipt of money in future.
- Preference for present consumption – Most of the persons and companies in general, prefer current consumption over future consumption.
- Inflation – In an inflationary period a rupee today represents a greater real purchasing power than a rupee a year hence.
- Investment opportunities – Most of the persons and companies have a preference for present money because of availabilities of opportunities of investment for earning additional cash flow.

Many financial problems involve cash flow accruing at different points of time for evaluating such cash flow an explicit consideration of time value of money is required.

(d) The functions of treasury department management is to ensure proper usage, storage and risk management of liquid funds so as to ensure that the organisation is able to meet its obligations, collect its receivables and also maximize the return on its investments. Towards this end the treasury function may be divided into the following:

(i) **Cash Management:** The efficient collection and payment of cash both inside the organization and to third parties is the function of treasury department. Treasury normally manages surplus funds in an investment portfolio.

(ii) **Currency Management:** The treasury department manages the foreign currency risk exposure of the company. It advises on the currency to be used when invoicing overseas sales. It also manages any net exchange exposures in accordance with the company policy.

(iii) **Fund Management:** Treasury department is responsible for planning and sourcing the company's short, medium and long-term cash needs. It also participates in the decision on capital structure and forecasts future interest and foreign currency rates.

(iv) **Banking:** Since short-term finance can come in the form of bank loans or through the sale of commercial paper in the money market, therefore, treasury department carries out negotiations with bankers and acts as the initial point of contact with them.

(v) **Corporate Finance:** Treasury department is involved with both acquisition and disinvestment activities within the group. In addition, it is often responsible for investor relations.

(e) (i) **Explicit Costs** - These costs are also known as out of pocket costs and refer to costs involving immediate payment of cash. Salaries, wages, postage and telegram, printing and stationery, interest on loan etc. are some examples of explicit costs involving immediate cash payment.

(ii) **Cut - off Rate:** It is the minimum rate which the management wishes to have from any project. Usually this is based upon the cost of capital. The management gains only if a project gives return of more than the cut - off rate. Therefore, the cut - off rate can be used as the discount rate or the opportunity cost rate.