PAPER – 3 : COST ACCOUNTING AND FINANCIAL MANAGEMENT

*Question No. **1** is compulsory.*

*Attempt any **five** questions out of the remaining **six** questions.*

In case, any candidate answers extra question(s)/ sub-question(s) over and above the required number, then only the requisite number of questions first answered in the answer book shall be valued and subsequent extra question(s) answered shall be ignored.

Working notes should form part of the answer.

Question 1

Answer the following:

(a) A manufacturing company having strength of 50 workers planned for 300 working days of 8 hours each. Based on earlier year's trend, it is estimated that average absenteeism per worker would be 10 days in addition to eligibility of 20 days annual leave. The budgeted overheads amounted to ₹ 15,12,000.

During the year, factory worked for 2 extra days to meet the production targets. The actual average absenteeism per worker was 8 days. Out of 50 workers, 20 took the annual leave of 20 days and the remaining took 15 days leave. 450 hours were lost due to machine breakdown. Overtime worked on production during the year amounted to 650 hours. Actual overheads amounted to ₹ 15,92,600.

You are required to:

(i) Calculate overhead absorption rate based on direct labour hours.

(ii) Determine the under or over absorption of overheads during the year.

(b) K. Ltd. has the following capital structure as per the books of accounts:

Equity Capital (in shares of ₹ 10 each, fully paid up-at par)	*₹ 20 crores*
15% Debentures (of ₹ 100 each)	*₹ 15 crores*
18% Term Loans	*₹ 18 crores*

The next expected dividend on equity shares per share is ₹ 6; the dividend per share is expected to grow at the rate of 8%. The market price per share is ₹ 60.

Debentures, redeemable after 8 years, are currently selling at ₹ 90 per debenture.

The Income-tax rate for the company is 30%.

You are required to calculate the current weighted average cost of capital using market value proportions.

(Note: Workings should be upto three decimal places.)

(c) *In a chemical factory, two products 'A' and 'B' emerges from a refining process. For the month of March-2021, following details are available:*

Total cost upto separation point is ₹ 9,84,000.

Products	*Output (In litres)*	*Selling Price per unit at the split-off point (₹)*	*Additional processing cost after the split-off point (₹)*	*Sales Value after further processing (₹)*
A	*24,000*	*80.00*	*1,20,000*	*23,02,500*
B	*4,500*	*39.63*	*18,000*	*42,000*

You are required to prepare a 'Statement of Profitability' based on:

(a) If the products are sold after further processing in the factory.

(b) If the products are sold at the split-off point.

(d) *Following information is available from the financial records of ABC Limited:*

	Balance as on 31.03.2021	*Balance as on 31.03.2020*
Profit & loss account	*15,60,000*	*14,35,000*
Plant & machinery (net of depreciation)	*12,58,000*	*9,84,000*
Equity Share Capital @ ₹ 10 each	*20,00,000*	*20,00,000*
Investments	*4,50,000*	*5,00,000*

Additional Information:

(i) New plant & machinery amounting to ₹ 4,92,500 was purchased and the machinery costing ₹ 1,12,500 with a book value of ₹ 75,000 was sold. A gain of ₹ 17,500 made on the sale of machinery.

(ii) Some investments were sold for ₹ 58,000 and its profit transferred to profit and loss account.

(iii) ₹ 1,25,000 transferred to general reserve during the year.

(iv) ₹ 60,000 by way of dividend received during the year ending 31-03-2021 including ₹ 4,000 from pre-acquisition profits which was credited to investment account.

(v) Provision for Income-tax made during the year was ₹ 1,32,000.

(vi) Interim dividend @ ₹ 0.75 per share paid during the year.

You are required to calculate funds from operation for the year ended 31-03-2021.

(4 x 5 = 20 Marks)

Answer

(a) (i) Calculation of overhead absorption rate based on direct labour hours

Normal labour hours (50 workers x 300 working days x 8 hours)	1,20,000 labour hours
Less: Absenteeism and Leave [50 workers x (10 + 20) days x 8 hours)	12,000 labour hours
Budgeted hours	**1,08,000 labour hours**
Overhead absorption rate = $\frac{₹\ 15,12,000}{1,08,000\ \text{hours}}$ = **₹ 14 per labour hour**	

(ii) Computation of under or over absorption of overhead

Normal labour hours (50 workers x 300 working days x 8 hours)	1,20,000 labour hours
Add: 2 extra days worked (50 workers x 2 days x 8 hours)	800 labour hours
Add: Overtime	650 labour hours
Less: Absenteeism (50 workers x 8 days x 8 hours)	3,200 labour hours
Less: Annual leave [(20 workers x 20 days x 8 hours) + (30 workers x 15 days x 8 hours)]	6,800 labour hours
Less: Idle hours	450 labour hours
Utilizable hours	1,11,000 labour hours

Overhead absorbed = 1,11,000 labour hours x ₹ 14 per labour hour = ₹ 15,54,000

Overhead under-absorbed = Actual – Absorbed

= ₹ 15,92,600 - ₹ 15,54,000

= **₹ 38,600**

Alternatively, Part(ii) of the solution can be done as below:

(ii) Computation of under or over absorption of overhead

Normal labour hours (50 workers x 300 working days x 8 hours)	1,20,000 labour hours
Add: Overtime	650 labour hours
Less: Leave [(20 workers x 20 days x 8 hours) + (30 workers x 15 days x 8 hours)]	6,800 labour hours

Less: Idle hours	450 labour hours
Utilizable hours	1,13,400 labour hours

Overhead absorbed = 1,13,400 labour hours x ₹ 14 per labour hour = ₹ 15,87,600

Overhead under-absorbed = Actual – Absorbed

= ₹ 15,92,600 - ₹ 15,87,600

= ₹ 5,000

(b) Workings:

(i) Cost of Equity (K_e) $= \frac{D_1}{P_0} + g = \frac{₹\ 6}{₹\ 60} + 0.08 = 0.18 = 18\%$

(ii) Cost of Debentures (K_d) $= \frac{I(1-t)\left[\frac{RV-NP}{n}\right]}{\frac{RV+NP}{2}}$

$$= \frac{₹15(1-0.30)+\frac{(₹100-₹90)}{8\,\text{years}}}{\frac{(₹100+₹90)}{2}}$$

= 0.12368 or 12.368%

(iii) Cost of Term Loans (Kt) = r (1 - t) = 18% (1 - 0.30) = 12.6%

Computation of Weighted Average Cost of Capital

(WACC using market value weights)

Source of capital	Market Value of capital (₹ in crores)	Weight	Cost of capital (%)	WACC (%)
Equity Capital (₹ 60 × 2 crores shares)	120.00	0.792	18.000	14.256
15% Debentures (₹ 90 × 0.15 crores debentures)	13.50	0.089	12.368	1.101
18% Term Loans	18.00	0.119	12.600	1.499
Total	151.50	1.000		**16.856**

(c) Working Note:

Apportionment of joint costs on the basis of Market value after further processing.

$$\text{Apportioned joint cost} = \frac{\text{Sales value of each product}}{\text{Total Market value after further processing}} \times \text{Total joint cost}$$

Where,

Total Joint cost = ₹ 9,84,000

Total sales after further processing (A + B) = ₹ 23,02,500 + ₹ 42,000 = ₹ 23,44,500

Share of A in joint cost = $\frac{23,02,500}{23,44,500}$ x ₹ 9,84,000 = **₹ 9,66,372**

Share of B in joint cost = $\frac{42,000}{23,44,500}$ x ₹ 9,84,000 = **₹ 17,628**

(a) Statement of profitability if the products are sold after further processing

	A (₹)	B (₹)	Total (₹)
Sales Value after further processing	23,02,500	42,000	23,44,500
Less: Apportioned Joint Costs (refer Working Note)	9,66,372	17,628	9,84,000
Less: Additional processing Cost	1,20,000	18,000	1,38,000
Profit	**12,16,128**	**6,372**	12,22,500

(b) Statement of profitability if the products are sold at split-off point

	A (₹)	B (₹)	Total (₹)
Sales Value at split-off point	19,20,000 (24,000 litres x ₹ 80)	1,78,335 (4,500 litres x ₹ 39.63)	20,98,335
Less: Apportioned Joint Costs (refer Working Note)	9,66,372	17,628	9,84,000
Profit	**9,53,628**	**1,60,707**	11,14,335

Alternatively,

Joint costs can also be apportioned on the basis of Market Value at split-off point

Working Note:

Apportionment of joint costs on the basis of Market Value at split-off point.

$$\text{Apportioned joint cost} = \frac{\text{Sales value of each product}}{\text{Total Sales value at split-off point}} \times \text{Total joint cost}$$

Where,

Total Joint cost = ₹ 9,84,000

Total sales value at split-off point (A + B) = ₹ 19,20,000 + ₹ 1,78,335 = ₹ 20,98,335

$$\text{Share of A in joint cost} = \frac{19,20,000}{20,98,335} \times ₹\ 9,84,000 = \textbf{₹ 9,00,371}$$

$$\text{Share of B in joint cost} = \frac{1,78,335}{20,98,335} \times ₹\ 9,84,000 = \textbf{₹ 83,629}$$

(a) Statement of profitability if the products are sold after further processing

	A (₹)	B (₹)	Total (₹)
Sales Value after further processing	23,02,500	42,000	23,44,500
Less: Apportioned Joint Costs (refer Working Note)	9,00,371	83,629	9,84,000
Less: Additional processing Cost	1,20,000	18,000	1,38,000
Profit	**12,82,129**	**(59,629)**	12,22,500

(b) Statement of profitability if the products are sold at split-off point

	A (₹)	B (₹)	Total (₹)
Sales Value at split-off point	19,20,000 (24,000 litres x ₹80)	1,78,335 (4,500 litres x ₹39.63)	20,98,335
Less: Apportioned Joint Costs (refer Working Note)	9,00,371	83,629	9,84,000
Profit	**10,19,629**	**94,706**	11,14,335

Alternatively,

Joint costs can also be apportioned on the basis of physical units

Working Note:

Apportionment of joint costs on the basis of Physical Unit Method.

Apportioned joint cost will be shared in the ratio of Physical Units i.e. 24,000 : 4,500.

Total Joint cosy = ₹ 9,84,000

Share of A in joint cost = $\frac{24,000}{28,500}$ x 9,84,000 = **₹ 8,28,632**

Share of B in joint cost = $\frac{4,500}{28,500}$ x 9,84,000 = **₹ 1,55,368**

(a) Statement of profitability if the products are sold after further processing

	A (₹)	B (₹)	Total (₹)
Sales Value after further processing	23,02,500	42,000	23,44,500
Less: Apportioned Joint Costs (refer Working Note)	8,28,632	1,55,368	9,84,000
Less: Additional processing Cost	1,20,000	18,000	1,38,000
Profit	**13,53,868**	**(1,31,368)**	12,22,500

(b) Statement of profitability if the products are sold at split-off point

	A (₹)	B (₹)	Total (₹)
Sales Value at split-off point	19,20,000 (24,000 litres x ₹ 80)	1,78,335 (4,500 litres x ₹ 39.63)	20,98,335
Less: Apportioned Joint Costs (refer Working Note)	8,28,632	1,55,368	9,84,000
Profit	**10,91,368**	**22,967**	11,14,335

(d) Calculation of Funds from Operation for the year ended 31-03-2021

		(₹)
	Profit and loss as on 31.03.2021	15,60,000
Add:	Depreciation (refer Working Note 1)	1,43,500
	Transfer to General Reserves	1,25,000
	Provision for Income Tax	1,32,000
	Interim Dividend (₹ 0.75 x 2,00,000)	**1,50,000**
		21,10,500
Less:	Gain on Sale of Plant & machinery	17,500
	Gain on Sale of Investment (refer Working Note 2)	12,000
	Dividend Received (60,000 – 4,000)	**56,000**
	Profit and loss as on 31.03.2020	14,35,000
	Fund from Operations	**5,90,000**

Working Notes:

1. Plant & Machinery A/c

Particulars	₹	Particulars	₹
To Balance b/d	9,84,000	By Depreciation A/c (Bal. fig.)	1,43,500
To Bank (New purchase)	4,92,500	By Cash (₹ 75,000 + ₹ 17,500)	92,500
To P/L (Gain on sale)	17,500	By Balance c/d	12,58,000
	14,94,000		14,94,000

2. Investments A/c

Particulars	₹	Particulars	₹
To Balance b/d	5,00,000	By Cash (Sale)	58,000
To P/L (Gain on sale) (Bal. fig.)	12,000	By Cash (pre-acquisition profit)	4,000
		By Balance c/d	4,50,000
	5,12,000		5,12,000

Question 2

(a) A skilled worker engaged in machining of component 'WYE' receives an ordinary wage rate of ₹ 504 per day of 8 hours. The standard output for machining the component has been fixed at 64 pieces per hour (time as fixed for premium bonus).

In a certain week of 48 hours, the output of the worker on this machine is 3,456 pieces.

You are required to calculate total weekly earnings of worker under the following:

(i) Rowan premium bonus system;

(ii) Halsey Weir premium plan;

(iii) Emerson efficiency system and

(iv) If a bonus of ₹ 1.50 is paid per piece in excess of standard output. ***(8 Marks)***

(b) A Ltd. is considering the purchase of a machine which will perform some operations which are at present performed by the workers. Machine "I" and Machine "II" are the two alternative models.

The following details of Machine "I" and Machine "II" are available:

	Machine I (₹)	*Machine II (₹)*
Cost of machine	*70,000*	*1,80,000*
Estimated life of machine	*7 years*	*9 years*

Estimated cost of maintenance p.a.	*5,000*	*8,000*
Estimated additional cost of indirect material p.a.	*3,000*	*4,000*
Estimated savings in scrap p.a.	*8,000*	*12,000*
Estimated cost of supervision p.a.	*13,000*	*18,000*
Estimated savings in wages p.a.	*40,000*	*80,000*

Depreciation will be charged on straight line basis. The tax rate is 30%.

You are required to:

Evaluate the alternatives according to each of the following:

(i) Average rate of return method,

(ii) Present value index method assuming cost of capital being 12%.

(The present value of ₹ 1.00 @ 12% p.a. for 7 years is 4.564 and for 9 years is 5.328)

(8 Marks)

Answer

(a) Working Notes:

1.	Hours worked	48
2.	Standard hours required to produce 3,456 pieces (3,456 pieces ÷ 64 pieces per hour)	54
3.	Time saved in hours (54 hours – 48 hours)	6
4.	Wage rate per hour (₹) (₹ 504 ÷ 8 hours)	63
5.	Standard output (64 pieces x 48 hours)	3,072
6.	Actual output in pieces	3,456

(i) Rowan premium Bonus system

$$\text{Total Earnings} = \text{Hours worked} \times \text{Rate per hour} + \left(\frac{\text{Time saved}}{\text{Time allowed}} \times \text{Hours worked} \times \text{Rate per hour}\right)$$

$$= 48 \times 63 + \left[\frac{6}{54} \times 48 \times 63\right]$$

$$= 3{,}024 + \mathbf{336} = \mathbf{₹\ 3{,}360}$$

(ii) Halsey Weir premium Plan

$$\text{Total Earnings} = \text{Hours worked} \times \text{Rate per hour} + \left(\frac{30}{100} \times \text{Time saved} \times \text{Rate per hour}\right)$$

$$= 48 \times 63 + \left(\frac{30}{100} \times 6 \times 63\right)$$

$$= 3{,}024 + \mathbf{113.40} = \mathbf{₹\ 3{,}137.40}$$

(iii) Emerson Efficiency System

$$\text{Efficiency level (\%)} = \left[\frac{\text{Actual output}}{\text{Standarad output}} \times 100\right] = \frac{3{,}456 \text{ pieces}}{3{,}072 \text{ pieces}} \times 100 = 112.5\%$$

In this system, if above 100% efficiency, bonus of 20% of basic wages plus 1% for each 1% increase in efficiency is admissible.

So, Bonus rate = 20% + 12.50% = **32.50%**

Total Earnings = 3,024 + (3,024 x 0.325) = 3,024 + 982.8 = **₹ 4,006.82**

(iv) If a bonus of ₹ 1.50 is paid per piece in excess of standard output

Total Earnings = 3,024 + 1.5 (3,456 – 3,072) = 3,024 + 576 = **₹ 3,600**

(b) Working Notes:

$$\text{Depreciation on Machine I} = \frac{70{,}000}{7} = ₹\,10{,}000$$

$$\text{Depreciation on Machine II} = \frac{1{,}80{,}000}{9} = ₹\,20{,}000$$

Particulars	Machine I (₹)	Machine II (₹)
Annual Savings:		
Wages	40,000	80,000
Scrap	8,000	12,000
Total Savings (A)	48,000	92,000
Annual Estimated Cash Cost:		
Indirect Material	3,000	4,000
Supervision	13,000	18,000
Maintenance	5,000	8,000
Total Cash Cost (B)	21,000	30,000

Annual Cash Savings (A-B)	27,000	62,000
Less : Depreciation	10,000	20,000
Annual Savings Before Tax	17,000	42,000
Less : Tax @ 30%	5,100	12,600
Annual Savings/Profit (After Tax)	**11,900**	**29,400**
Add : Depreciation	10,000	20,000
Annual Cash Inflows	**21,900**	**49,400**

Evaluation of Alternatives

(i) Average Rate of Return Method (ARR)

$$\text{ARR} = \frac{\text{Average Annual Net Savings}}{\text{Average Investment}}$$

Machine I $= \frac{11,900}{35,000} \times 100$ **= 34%**

Machine II $= \frac{29,400}{90,000} \times 100$ = **32.67%**

Alternatively, calculation of ARR can be done as below:

$$\text{ARR} = \frac{\text{Average Annual Net Savings}}{\text{Initial Investment}}$$

Machine I $= \frac{11,900}{70,000} \times 100$ = **17%**

Machine II $= \frac{29,400}{1,80,000} \times 100$ = **16.33%**

***Decision*:** Machine I is better.

(ii) Present Value Index Method

Present Value of Cash Inflow = Annual Cash Inflow x P.V. Factor @ 12%

Machine I = 21,900 x 4.564

= ₹ 99,951.60

Machine II = 49,400 x 5.328

= ₹ 2,63,203.20

$$\text{P.V. Index} = \frac{\text{Present Value of Cash inflow}}{\text{Investment}}$$

$$\text{Machine I} = \frac{99,951.60}{70,000} = \mathbf{1.428}$$

$$\text{Machine II} = \frac{2,63,203.20}{1,80,000} = \mathbf{1.462}$$

***Decision*:** Machine II is better.

Question 3

(a) Balance Sheet of ABC Ltd is as follows:

Balance Sheet as on 31-03-2020

Liabilities	*Amount (₹)*	*Assets*		*Amount (₹)*
Share Capital	*2,00,000*	*Land and Buildings*		*40,000*
Reserve & Surplus	*30,000*	*Plant & Machinery*	*1,00,000*	
Current Liabilities	*20,000*	*Less: Depreciation*	*30,000*	*70,000*
		Stock		*55,000*
		Debtors		*45,000*
		Cash & Bank		*40,000*
	2,50,000			*2,50,000*

Following additional information is also provided for the year 2020-21:

(i) The company has decided for re-organisation of its total liabilities, (with the amount of share capital remaining the same) as follows:

	(as % of Total Liabilities)
Share Capital	*40%*
Reserves	*20%*
10% Debentures	*15%*
Trade Creditors	*25%*

Debentures will be issued on 1st April; interest will be paid annually on 31st March.

(ii) Land and Buildings remained unchanged. Additional Plant and Machinery has been introduced and further ₹ 10,000 depreciation is to be written off on additions. (The total fixed assets then constituted 30% of total assets.)

(iii) Quick assets ratio is 1:1.

(iv) The Debtors (One fourth of the quick assets) to sales ratio represents a credit period of 1.5 month. There are no cash sales.

(v) Return on Net worth is 15%.

(vi) Gross Profit is at the rate of 40% of selling price.

You are required to prepare:

(i) Projected Profit & Loss Account for the year ended March, 2021 and

(ii) Balance Sheet as at 31st March, 2021.

(Ignore Corporate Tax) ***(8 Marks)***

(b) Dee Cee Limited manufactures and sells two products 'Super' and 'Deluxe'.

Dee Cee Limited's budget department gathered the following data to prepare the budgets for 2021-22:

	Super	*Deluxe*
Expected sales (in units)	*48,000*	*72,000*
Selling price p.u.	*₹ 750*	*₹ 950*
Expected inventory as at 01-04-2021 (units)	*3,900*	*7,600*
Target inventory as at 31-03-2022 (units)	*10% of production*	*8% of production*

Company uses materials A and B in the manufacture of products "Super and Deluxe". Projected data for 2021-22 with respect to direct materials are as follows:

Material	*Cost per kg (₹)*	*Normal wastage*	*Material required per unit of output*		*Expected inventory as at 01.04.2021*
			Super	*Deluxe*	
A	*60*	*4%*	*2 kg*	*4 kg*	*32,500 kg*
B	*80*	*4%*	*3 kg*	*2.4 kg*	*28,800 kg*

Cost of opening stock of materials A and B is ₹ 57 per kg and ₹ 75 per kg respectively. Target inventory as on 31-03-2022 for material A and B will be 10% more than the opening inventory. Company accounts for direct materials using FIFO method.

You are required to prepare the following budgets for the year 2021-22:

(i) Production budget (in units).

(ii) Direct material usage budget (in quantities and rupees both).

(iii) Direct material purchase budget (in units). ***(8 Marks)***

Answer

(a) Working Notes:

1. Calculation of Total Liabilities

Particulars	%	(₹)
Share capital	40%	2,00,000
Reserves	20%	1,00,000
10% Debentures	15%	75,000
Trade Creditors	25%	1,25,000
Total	100%	5,00,000

2. Calculation of Fixed Assets & Current assets

Total liabilities = Total Assets = ₹ 5,00,000

Fixed Assets = 30% of total assets

= ₹ 5,00,000 × 30/100 = **₹ 1,50,000**

Current assets = Total assets – Fixed assets

= ₹ 5,00,000 – ₹ 1,50,000 = **₹ 3,50,000**

3. Calculation of Plant & Machinery

Particulars	₹
Total Fixed assets	1,50,000
Less: Land & Buildings	40,000
Plant and Machinery (after providing depreciation)	**1,10,000**
Depreciation on Machinery up to 31-3-2020	30,000
Add: Further depreciation	10,000
Total depreciation	**40,000**

4. Calculation of Stock & Debtors

$$\text{Quick Assets ratio} = \frac{\text{Current assets - stock}}{\text{Current liabilities}} = 1$$

$$1 = \frac{₹\ 3,50,000 - \text{stock}}{₹\ 1,25,000}$$

₹ 1,25,000 = ₹ 3,50,000 – Stock

Stock = ₹ 3,50,000 - ₹ 1,25,000

= **₹ 2,25,000**

Debtors = 1/4th of quick assets

= ₹ (3,50,000 – 2,25,000) × 1/4

= **₹ 31,250**

5. Calculation of Sales & Gross profit

Receivables turnover ratio = $\frac{\text{Receivables}}{\text{Sales}} \times 12$ months = 1.5 month

$1.5 = \frac{31,250}{\text{Sales}} \times 12$

Sales = 31,250/1.5 x 12

= ₹ 2,50,000

Gross profit (40% of sales) = ₹ 2,50,000 × 40/100 **= ₹ 1,00,000**

6. Calculation of Net profit

Return on Net worth = 15%

Net worth = ₹ 2,00,000 + ₹ 1,00,000

= ₹ 3,00,000

Net profit = ₹ 3,00,000 × 15/100 = ₹ **45,000**

(i) Projected profit and loss account for the year ended 31st March, 2021

Particulars	₹	Particulars	₹
To cost of goods sold (b/f)	1,50,000	By sales	2,50,000
To gross profit c/d	1,00,000		
	2,50,000		2,50,000
To debenture interest (75,000 x 10%)	7,500	By gross profit b/d	1,00,000
To depreciation	10,000		
To Other expenses (b/f)	37,500		
To net profit	45,000		
	1,00,000		1,00,000

(ii) Projected Balance Sheet as at 31st March, 2021

Liabilities	₹	Assets	₹	₹
Share capital	2,00,000	Fixed assets		
Reserves & Surplus	1,00,000	Land & buildings		40,000
10% Debentures	75,000	Plant & machinery	1,50,000	
Current liabilities		*Less*: Depreciation	40,000	1,10,000
Trade creditors	1,25,000	Current assets		
		Stock	2,25,000	
		Debtors	31,250	
		Bank (b/f)	93,750	3,50,000
	5,00,000			5,00,000

(b) Working Notes:

1. Calculation of units to be produced and Closing Inventory

As we know, Opening Inventory + Production = Sales + Closing Inventory

For 'Super' product (in units)

3,900 + Production = 48,000 + 10% of Production

90% of Production = 44,100

So, Production = 49,000 units

Closing Inventory = 10% of 49,000 units = 4,900 units

For 'Deluxe' product (in units)

7,600 + Production = 72,000 + 8% of Production

92% of Production = 64,400

So, Production = 70,000 units

Closing Inventory = 8% of 70,000 units = 5,600 units

2. Total Consumption of Direct Material A and B (in kg)

	A	B
Productive Consumption in Super	98,000 (49,000 units x 2 kg)	1,47,000 (49,000 units x 3 kg)
Productive Consumption in Deluxe	2,80,000 (70,000 units x 4 kg)	1,68,000 (70,000 units x 2.40 kg)

A.	Total Productive Consumption	3,78,000	3,15,000
B.	Wastage (A/96 x 4)	15,750	13,125
C.	Total Consumption (A/96 x 100)	**3,93,750**	**3,28,125**

(i) Production Budget (in units)

	Super	Deluxe
Expected Sales	48,000	72,000
Add: Target Closing Inventory	**4,900**	**5,600**
Total quantity required	52,900	77,600
Less: Opening Inventory	3,900	7,600
Units to be produced	**49,000**	**70,000**

(ii) Direct Material Usage Budget (using FIFO) (in quantities & `)

Material	Opening Inventory			Purchase			Total	
	Qty (in kg)	Cost per kg (₹)	Amount (₹)	Qty (in kg)	Cost per kg (₹)	Amount (₹)	Qty (in kg)	Amount (₹)
A	32,500	57	18,52,500	3,61,250	60	2,16,75,000	3,93,750	**2,35,27,500**
B	28,800	75	21,60,000	2,99,325	80	2,39,46,000	3,28,125	**2,61,06,000**

(iii) Direct Material Purchase Budget (in units)

	A	B
Total Material Consumption	3,93,750	3,28,125
Add: Closing Inventory (110% of Opening Inventory)	35,750	31,680
Less: Opening Inventory	32,500	28,800
Direct Material Purchased	**3,97,000**	**3,31,005**

Question 4

(a) M/s. GPS Private Limited is engaged in producing milk powder. The management of the company is considering for transportation of 29,952 Kilolitre (KL) of milk per month to its storage tanks that are situated 30 km away from its collection centres. Two types of milk tankers are available in the market, namely 8-KL and 6-KL of capacity.

The details of operating costs for the milk tankers are as follows:

Particulars	*8-KL Tanker*	*6-KL Tanker*
Purchase Price per tanker	*₹ 18,04,000*	*₹ 12,00,000*
Estimated life	*6 years*	*6 years*
Residual value per tanker	*₹ 4,00,000*	*₹ 3,00,000*
Other fixed costs per month, per tanker	*₹ 55,980*	*₹ 46,540*
Km. per litre of diesel	*4 km.*	*5 km.*

Additional Information:

(i) Cost of diesel per litre is ₹ 80.

(ii) Each vehicle can run 6 trips (up and down) each day and can run on an average of 26 days each month.

(iii) Drivers will have to be recruited according to the number of milk tankers to be used. In addition, one extra driver for every eight milk tankers will be required for the entire fleet. Each driver will cost ₹ 15,000 per month.

(iv) Yet another possibility is to hire enough milk tankers (8-KL capacity only) from a transport company at the rate of ₹ 63,000 per month per milk tanker. The transport company will bear other fixed costs. However, GPS Private Limited has to bear the cost of drivers and other operational costs.

You are required to prepare:

(a) Statement of operating cost for each alternative for a month.

(b) Compute the cost per kilolitre of milk transported.

(c) Advise the company on an appropriate choice among the above three alternatives.

(Note: Ignore finance cost.) ***(8 Marks)***

(b) JKL Limited is currently selling 90,000 units of its product @ ₹ 150 per unit. At current level of production, the cost per unit is ₹ 132 per unit. Variable cost ratio is 80% of sales. Currently all its sales are on credit basis. The company's existing credit terms are 2/20, net 60 days. Generally 30% of its customers avail the cash discount facility. The current bad debt loss is 2%. The opportunity cost of investment in receivables is 12%.

The company is considering proposal to change the credit terms to 3/20, net 60 days. As a result following is expected:

Increase in sales	*30%*
Increase in average stock	*₹ 4,00,000*
Increase in average creditors	*₹ 2,40,000*
Increase in present fixed cost	*10%*

Increase in % of customers availing the Cash discount *100%*

Expected bad debt loss *1.5%*

Evaluate the proposal and give your recommendations whether the company should accept the proposal.

(Assume 360 days in a year and investment in debtors to be taken on total cost)

(8 Marks)

Answer

(a) Working Notes:

1. Calculation of No. of tankers required

	8-KL	6-KL
A. Total Kilolitres (KL) of Milk to be transported per month	29,952	29,952
B. Capacity of transportation per vehicle per month	1,248 (6 trips × 26 days × 8 KL)	936 (6 trips × 26 days × 6 KL)
C. No. of Vehicles required (A/B)	**24**	**32**

2. Calculation of Total Distance (in km.) covered per month

Type of Tanker	No. of Vehicles	Km. per trip	Trips per day (up & down)	Days per month	Km. per month
8-KL	24	30	12 (6 x 2)	26	2,24,640
6-KL	32	30	12 (6 x 2)	26	2,99,520

(a) Statement of Operating Cost for each alternative for a month

Particulars	8-KL (24 Vehicles) (₹)	6- KL (32 Vehicles) (₹)	Hired 8-KL (24 Vehicles) (₹)
(i) Running Costs			
Diesel Cost	44,92,800 $\left(\frac{2,24,640\,km}{4\,km} \times ₹\,80\right)$	47,92,320 $\left(\frac{2,99,520\,km}{5\,km} \times ₹\,80\right)$	44,92,800
Cost of Driver	4,05,000 [₹ 15,000 × (24 + 3)]	5,40,000 [₹ 15,000 × (32 + 4)]	4,05,000
	48,97,800	**53,32,320**	**48,97,800**

(ii) Standing charges			
Depreciation	4,68,000 $\left[\left(\frac{₹\,18,04,000 - ₹\,4,00,000}{6\text{ years}}\right) \times \frac{1}{12} \times 24\right]$	4,00,000 $\left[\left(\frac{₹\,12,00,000 - ₹\,3,00,000}{6\text{ years}}\right) \times \frac{1}{12} \times 32\right]$	
Other fixed cost	13,43,520 (₹ 55,980 × 24)	14,89,280 (₹ 46,540 × 32)	-
	18,11,520	**18,89,280**	-
(iii) Hire charges	-	-	**15,12,000** (₹ 63,000 × 24)
Total Cost [(i) + (ii) + (iii)]	**67,09,320**	**72,21,600**	**64,09,800**

(b) Calculation of Cost Per KL

Cost per KL = Total Cost/ Total Kiloliters (KL)

8-KL = ₹ 67,09,320/29,952 KL = **₹ 224**

6-KL = ₹ 72,21,600/29,952 KL = **₹ 241.11**

Hired 8-KL = ₹ 64,09,800/29,952 KL = **₹ 214**

(c) Advise: It is advisable to hire the milk tankers from transport company since the cost per KL is lowest i.e. **₹ 214**.

Alternatively, if we consider "cost of hire" as ₹ 65,000 as given in the Hindi version, operating Cost for "Hired 8-KL" for a month will change, However, there will be no impact on working notes i.e. on Calculation of No. of tankers required and Calculation of Total Distance (in km.) covered per month.

The alternative solution of the relevant part is given below:

(a) Statement of operating Cost for each alternative for a month

Particulars	8-KL (24 Vehicles) (₹)	6- KL (32 Vehicles) (₹)	Hired 8-KL (24 Vehicles) (₹)
(i) Running Costs			
Diesel Cost	44,92,800 $\left(\frac{2,24,640\text{ km}}{4\text{ km}} \times ₹\,80\right)$	47,92,320 $\left(\frac{2,99,520\text{ km}}{5\text{ km}} \times ₹\,80\right)$	44,92,800
Cost of Driver	4,05,000 [₹ 15,000 × (24 + 3)]	5,40,000 [₹ 15,000 × (32 + 4)]	4,05,000
	48,97,800	53,32,320	48,97,800

(ii) Standing charges			
Depreciation	4,68,000 $\left[\left(\frac{₹\,18,04,000 - ₹\,4,00,000}{6\text{ years}}\right) \times \frac{1}{12} \times 24\right]$	4,00,000 $\left[\left(\frac{₹\,12,00,000 - ₹\,3,00,000}{6\text{ years}}\right) \times \frac{1}{12} \times 32\right]$	
Other fixed cost	13,43,520 (₹ 55,980 × 24)	14,89,280 (₹ 46,540 × 32)	-
	18,11,520	18,89,280	-
(iii) Hire charges	-	-	15,60,000 (₹ 65,000 × 24)
Total Cost [(i) + (ii) + (iii)]	**67,09,320**	**72,21,600**	**64,57,800**

(b) Calculation of Cost Per KL

Cost per KL = Total Cost/ Total Kiloliters (KL)

8-KL = ₹ 67,09,320/29,952 KL = **₹ 224**

6-KL = ₹ 72,21,600/29,952 KL = **₹ 241.11**

Hired 8-KL =₹ 64,57,800/29,952 KL = **₹ 215.60**

(c) Advise: It is advisable to hire the milk tankers from transport company since the cost per KL is lowest i.e. **₹ 215.60**

(b) Working Notes:

(i) Calculation of Cash Discount

Cash Discount = Total credit sales × % of customers who take up discount × Rate

Present Policy = 1,35,00,000 × 0.30 × 0.02 = ₹ 81,000

Proposed Policy = 1,75,50,000 × (0.30 × 2) × 0.03 = ₹ 3,15,900

(ii) Opportunity Cost of Investment in Receivables

Opportunity Cost

$$= \text{Total Cost of Credit Sales} \times \frac{\text{Average collection period}}{360} \times \frac{\text{Rate of return}}{100}$$

Present Policy $= 1,18,80,000 \times \frac{48^*}{360} \times 12\% = ₹\ 1,90,080$

Funds required for Proposed Policy $= 1,52,28,000 \times \frac{36^*}{360}$ = 15,22,800

Add: Increase in average Stock	= 4,00,000
Less: Increase in average Creditors	= 2,40,000
	₹ 16,82,800

Proposed policy = 16,82,800 x 12% = ₹ 2,01,936

* Weighted average collection period = (20 days x 0.30) + (60 days x 0.70) = **48 days**

Weighted average collection period = (20 days x 0.60) + (60 days x 0.40) = **36 days**

Statement showing Evaluation of Credit Policies

Particulars	**Present Policy (₹)**	**Proposed Policy (₹)**
Credit Sales (A) (90,000 units × 150); (90,000 units × 150 × 1.3)	1,35,00,000	1,75,50,000
Variable Cost @ 80% of sales	1,08,00,000	1,40,40,000
Fixed Cost (90,000 units × 12) (10,80,000 × 1.1)	10,80,000	11,88,000
Total Cost other than Bad Debts and Cash Discount (B)	1,18,80,000	1,52,28,000
Profit before Bad Debts and Cash Discount (A) – (B)	16,20,000	23,22,000
Less: Bad Debts @ 2% and 1.5%	2,70,000	2,63,250
Less: Cash Discount	81,000	3,15,900
Expected profit	12,69,000	17,42,850
Less: Opportunity Cost of Investment in Receivables	1,90,080	2,01,936
Net Benefit	**10,78,920**	**15,40,914**

Advise: Proposed policy should be adopted since the net benefit is increased by **₹ 4,61,994** (₹ 15,40,914 - ₹ 10,78,920)

Alternatively, the question can be solved based on incremental approach as below:

Working Notes:

(i) Calculation of Cash Discount

Cash Discount = Total credit sales × % of customers who take up discount × Rate

Present Policy = 1,35,00,000 × 0.30 × 0.02 = ₹ 81,000

Proposed Policy = 1,75,50,000 × (0.30 × 2) × 0.03 = ₹ 3,15,900

(ii) Opportunity Cost of Investment in Receivables

Opportunity Cost

$$= \text{Total Cost of Credit Sales} \times \frac{\text{Average collection period}}{360} \times \frac{\text{Rate of return}}{100}$$

Present Policy $= 1,18,80,000 \times \frac{48^*}{360} \times 12\% = ₹\ 1,90,080$

Funds required for Proposed Policy $= 1,52,28,000 \times \frac{36^*}{360}$ = 15,22,800

Add: Increase in average Stock = 4,00,000

Less: Increase in average Creditors = 2,40,000

₹ 16,82,800

Opportunity Cost of Investment of Proposed policy = 16,82,800 x 12% = ₹ 2,01,936

*Weighted average collection period = (20 days x 0.30) + (60 days x 0.70) = **48 days**

#Weighted average collection period = (20 days x 0.60) + (60 days x 0.40) = **36 days**

Statement showing Evaluation of Credit Policies

₹

Particulars	Present policy	Proposed policy	Incremental
Sales	1,35,00,000	1,75,50,000	
Less: Variable cost	1,08,00,000	1,40,40,000	
Contribution	27,00,000	35,10,000	8,10,000
Fixed cost	10,80,000	11,88,000	**-1,08,000**
cash discount	81,000	3,15,900	**-2,34,900**
Savings in Bad debt	2,70,000	2,63,250	6,750
Saving in Opportunity cost	1,90,080	2,01,936	**-11,856**
Net benefit			**4,61,994**

Advise: Proposed policy should be adopted since the net benefit is increased by **₹ 4,61,994**

Question 5

(a) What is virtual banking? State it's any three advantages.

(b) Write any four differences between Financial Accounting and Cost Accounting.

(c) Explain the following terms:

(i) Bridge Finance

(ii) Leveraged lease

(d) Explain First in First out (FIFO) and replacement price method of material issue. Also, state the circumstances of each method in which they are used. ***(4 x 4 = 16 Marks)***

Answer

(a) Virtual Banking and its Advantages

Virtual banking refers to the provision of banking and related services through the use of information technology without direct recourse to the bank by the customer.

The advantages of virtual banking services are as follows:

- Lower cost of handling a transaction.
- The increased speed of response to customer requirements.
- The lower cost of operating branch network along with reduced staff costs leads to cost efficiency.
- Virtual banking allows the possibility of improved and a range of services being made available to the customer rapidly, accurately and at his convenience.

(b) Difference between financial accounting and cost accounting is as follows:

	Basis	Financial Accounting	Cost Accounting
(i)	Objective	It provides information about the financial performance.	It provides information of ascertainment of cost for the purpose of cost control and decision making.
(ii)	Nature	It classifies records, presents and interprets transactions in terms of money.	It classifies, records, presents, and interprets in a significant manner the material, labour and overheads cost.
(iii)	Recording of data	It records Historical data.	It makes use of both the historical costs and pre-determined costs.

(iv)	Users of information	The users of financial accounting statements are shareholders, creditors, financial analysts and government and its agencies, etc.	The cost accounting information is used by internal management.
(v)	Analysis of costs and profits	It shows the either Profit or loss of the organization.	It provides the details of cost and profit of each product, process, job, contracts, etc.
(vi)	Time period	Financial Statements are prepared usually for a year.	Its reports and statements are prepared as and when required.
(vii)	Presentation of information	A set format is used for presenting financial information.	There are no set formats for presenting cost information.

(c) (i) Bridge finance: 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.

(ii) Leveraged Lease: Under this lease, a third party is involved beside lessor and lessee. The lessor borrows a part of the purchase cost (say 80%) of the asset from the third party i.e., lender and asset so purchased is held as security against the loan. The lender is paid off from the lease rentals directly by the lessee and the surplus after meeting the claims of the lender goes to the lessor. The lessor is entitled to claim depreciation allowance.

(d) First-in-First out Method (FIFO): It is a method of pricing the issues of materials, in the order in which they are purchased. In other words, the materials are issued in the order in which they arrive in the store or the items longest in stock are issued first. Thus each issue of material only recovers the purchase price which does not reflect the current market price.

Circumstances: This method is considered suitable in times of falling price because the material cost charged to production will be high while the replacement cost of materials will be low.

Replacement Price Method: Replacement price is defined as the price at which it is possible to purchase an item, identical to that which is being replaced or revalued. Under this method, materials issued are valued at the replacement cost of the items. This method pre-supposes the determination of the replacement cost of materials at the time of each issue; *viz.,* the cost at which identical materials could be currently purchased. The product cost under this method is at current market price, which is the main objective of the replacement price method.

Circumstances: This method is useful to determine true cost of production and to value material issues in periods of rising prices, because the cost of material considered in cost of production would be able to replace the materials at the increased price.

Question 6

(a) In a manufacturing unit, a gang of employees usually consists of 20 skilled employees and 15 unskilled employees, paid at standard hourly rates of ₹ 65 and ₹ 55, respectively. In a normal working week of 50 hours, the gang is expected to produce 5000 units of output.

In a certain week, the gang consisted of 25 skilled employees and 20 unskilled employees. Actual hourly rates paid were ₹ 70 and ₹ 50 respectively. Five hours were lost due to abnormal idle time and 5500 units of outputs were produced.

You are required to calculate the following variances showing adverse (A) or favourable (F):

(a) Labour Cost Variance

(b) Labour Rate Variance

(c) Labour Efficiency Variance

(d) Labour Idle Time Variance ***(8 Marks)***

(b) The capital structure of Ess Vee Limited is given below:

	Amount (₹)
Equity share capital (6 lakh shares of ₹ 10 each)	*60,00,000*
Reserve and surplus	*48,00,000*
12% Preference share capital	*25,00,000*
9% Debentures	*20,00,000*

Company wants to raise ₹ 50,00,000 for its expansion project which will raise the existing return (EBIT) on capital employed from 14% to 15%.

It is considering the following alternatives:

(i) Issue equity shares at a premium of ₹ 15 each for the entire amount.

(ii) Issue equity shares of ₹ 24,00,000 at a premium of ₹ 20 per share and issue 10% debentures for the balance amount.

Corporate tax rate is 25%.

Required:

(i) Evaluate the two alternatives and advice the company as to which alternative the company should choose.

(ii) Assume that the company choses best option as under point (i) above. It wants to pay dividend to equity shareholders at 15% and keep the total dividend pay-out (equity and preference dividend) at 80%. What level of EBIT the company should achieve to meet its commitments? ***(8 Marks)***

Answer

(a) Working Notes:

1. Calculation of Standard and Actual Cost

Category of Employees	Standard		Actual				
	Hours available	SR (₹)	AH paid	AR (₹)	AH x AR (₹)	Idle hours	AH Worked
Skilled	1,000 (50 x 20)	65	1,250 (50 x 25)	70	87,500	125 (5 x 25)	1,125
Unskilled	750 (50 x 15)	55	1,000 (50 x 20)	50	50,000	100 (5 x 20)	900
Total	**1,750**		**2,250**		**1,37,500**	**225**	**2,025**

2. Calculation of Standard hours for actual output (SH)

Skilled $= \frac{1,000}{5,000} \times 5,500 = 1,100$ hours

Unskilled $= \frac{750}{5,000} \times 5,500 = 825$ hours

(a) Labour Cost Variance = (SH × SR – AH × AR)

Skilled	= (1,100 hrs × ₹ 65 – ₹ 87,500)	= 16,000 (A)
Unskilled	= (825 hrs × ₹ 55 – ₹ 50,000)	= 4,625 (A)
		20,625 (A)

(b) Labour Rate Variance = AH paid (SR – AR)

Skilled	= 1,250 (₹ 65 - ₹ 70)	= 6,250 (A)
Unskilled	= 1,000 (₹ 55 - ₹ 50)	= 5,000 (F)
		1,250 (A)

(c) Labour Efficiency Variance = SR (SH – AH worked)

Skilled	= ₹ 65 (1,100 – 1,125)	= 1,625 (A)
Unskilled	= ₹ 55 (825 - 900)	= 4,125 (A)
		5,750 (A)

(d) Labour Idle time Variance = Idle hours × SR

Skilled	= 125 × ₹ 65	= 8,125 (A)
Unskilled	= 100 x ₹ 55	= 5,500 (A)
		13,625 (A)

(b) Working Notes:

1. Calculation of New Equity shares and Debentures

Particulars	**Alternative (i): Issue Equity shares only**	**Alternative (ii): Issue Equity Shares and 10% Debentures**
Number of Equity Shares (nos):		
- Existing	6,00,000	6,00,000
- Newly issued	2,00,000 $\left(\frac{₹\ 50,00,000}{₹\ (10+15)}\right)$	80,000 $\left(\frac{₹\ 24,00,000}{₹\ (10+20)}\right)$
Total	8,00,000	6,80,000
Debentures (₹)		
- Existing (9%)	20,00,000	20,00,000
- Newly issued (10%)	-	26,00,000
Total	20,00,000	46,00,000

2. Calculation of Earnings before interest and tax (EBIT) before & after expansion Project

Before Expansion:

Capital employed = 60,00,000 + 48,00,000 + 25,00,000 + 20,00,000 = ₹ 1,53,00,000

EBIT = 14% × ₹ 1,53,00,000 = ₹ 21,42,000

After expansion:

Capital employed = ₹ 1,53,00,000 + ₹ 50,00,000 = ₹ 2,03,00,000

Desired EBIT = 15% × ₹ 2,03,00,000 = ₹ 30,45,000

(i) Calculation of Earnings per share under the two alternatives:

	Existing	Alternative (i)	Alternative (ii)
	(₹)	(₹)	(₹)
Earnings before Interest and Tax (EBIT)	21,42,000	30,45,000	30,45,000
Less: Interest - 9% debentures	1,80,000	1,80,000	1,80,000
- 10% debentures	-	-	2,60,000
Earnings before Tax (EBT)	19,62,000	28,65,000	26,05,000
Less: Tax @ 25%	4,90,500	7,16,250	6,51,250
PAT	14,71,500	21,48,750	19,53,750
Less: Preference Dividend	3,00,000	3,00,000	3,00,000
Earnings available for Equity shareholders	11,71,500	18,48,750	16,53,750
No. of shares outstanding	6,00,000	8,00,000	6,80,000
Earnings per Share (EPS)	**1.953**	**2.311**	**2.432**
Ranking	**III**	**II**	**I**

Advise: Ess Vee Limited should choose Alternative (ii) as it gives the highest EPS i.e. **₹ 2.432.**

(ii) Calculation of level of EBIT if Dividend pay-out is 80% in Alternative (ii)

Total Dividend = Equity share Dividend + Preference Dividend

= [(₹ 10 x 0.15) x 6,80,000 shares] + ₹ 3,00,000 = ₹ 13,20,000

Also, Total Dividend pay-out = 80% = Total Dividend/PAT

0.8 = ₹ 13,20,000/PAT

PAT = ₹ 16,50,000

Further, PAT = (EBIT – Interest) (1-t)

₹ 16,50,000 = (EBIT – ₹ 4,40,000) (1 - 0.25)

Or, 0.75EBIT = ₹ 16,50,000 + ₹ 3,30,000 = ₹ 19,80,000

EBIT = ₹ 19,80,000/0.75 = **₹ 26,40,000**

Question 7

Answer any four of the following:

(a) How contract price is determined under "Cost plus contract" in contract costing?

Discuss one advantages and one disadvantage of cost plus contracts.

(b) State with reasons whether following statements are true or false:

(i) 5% decrease in selling price per unit and 10% increase in sales volume will increase the P/V ratio.

(ii) Decrease in the angle of incidence will increase the P/V ratio.

(iii) Differential cost analysis can be made only in marginal costing and not in absorption costing.

(iv) Valuation of stock is higher in absorption costing as compared to marginal costing.

(c) Discuss any four advantages of Preference share capital as an instrument of raising funds.

(d) As an aspect of financial management explain the term - "Effective Utilisation of funds".

(e) Explain the following briefly:

(i) Systematic risk and Unsystematic risk

(ii) Treatment of Normal Process Loss & Abnormal Process Loss in process costing.

(4 x 4 = 16 Marks)

Answer

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

Cost plus contracts have the following advantages and disadvantages:

Advantages:

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

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

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

Disadvantage - The contractor may not have any inducement to avoid wastages and effect economy in production to reduce cost.

(b)

Particulars	True/False with reasons
(i) 5% decrease in selling price per unit and 10% increase in sales volume will increase the P/V ratio.	**False.** **Reason:** Increase or decrease in physical sales volume will not change P/V ratio. Hence, 5% decrease in selling price per unit will decrease P/V ratio.
(ii) Decrease in the angle of incidence will increase the P/V ratio.	**False.** **Reason:** Angle of incidence is the angle at which sales line cuts the total cost line. If it is small, it indicates that the profits are being made at lower rate. Hence, decrease in the angle of incidence will decrease the P/V ratio.
(iii) Differential cost analysis can be made only in marginal costing and not in absorption costing.	**False.** **Reason:** Differential Cost represents the increase or decrease in total cost that result from any variation in operations. Differential cost, thus, includes both fixed and variable costs. Hence differential cost analysis can be made both in marginal costing and absorption costing.
(iv) Valuation of stock is higher in absorption costing as compared to marginal costing.	**True** **Reason:** Both fixed and variable costs are considered for inventory valuation in absorption costing, whereas only variable costs are considered for inventory valuation in marginal costing.

(c) Advantages of Issue of Preference Shares are:

(i) No dilution in EPS on enlarged capital base.

(ii) There is no risk of takeover as the preference shareholders do not have voting rights.

(iii) There is leveraging advantage as it bears a fixed charge.

(iv) The preference dividends are fixed and pre-decided. Preference shareholders do not participate in surplus profit as the ordinary shareholders.

(v) Preference capital can be redeemed after a specified period.

(d) Effective Utilization of Funds: The Finance Manager has to ensure that funds are not kept idle or there is no improper use of funds. The funds are to be invested in a manner such that they generate returns higher than the cost of capital to the firm. Besides this, decisions to invest in fixed assets are to be taken only after sound analysis using capital budgeting techniques. Similarly, adequate working capital should be maintained so as to avoid the risk of insolvency.

(e) (i) Unsystematic Risk & Systematic Risk

Unsystematic Risk: This is also called company specific risk as the risk is related with the company's performance. This type of risk can be reduced or eliminated by diversification of the securities portfolio. This is also known as diversifiable risk.

Systematic Risk: It is the macro- economic or market specific risk under which a company operates. This type of risk cannot be eliminated by the diversification hence, it is non-diversifiable. The examples are inflation, Government policy, interest rate etc.

(ii) Treatment of Abnormal Process Loss & Normal Process Loss in process costing

Abnormal Process Loss: The cost of an abnormal process loss unit is equal to the cost of a good unit. The total cost of abnormal process loss is credited to the process account from which it arises. Cost of abnormal process loss is not treated as a part of the cost of the product. In fact, the total cost of abnormal process loss is debited to costing profit and loss accounts.

Normal Process Loss: The cost of normal process loss in practice is absorbed by good units produced under the process. The amount realised by the sale of normal process loss units should be credited to the process account.