

Answer – 1(a)

- Actual production of P = 250 units
- Standard quantity of material A for actual production = 2 kg.× 250 units = 500 kg. (SQ)
- Actual quantity of material A for actual production = 1.5 kg.× 250 units = 450 kg. (AQ)
- Standard price per kg. of material A = Rs. 6 (SP)
- Actual price per kg. of material A = Rs. 8 (AP)
- (1) Total Material Cost Variance = (Standard Price × Standard Quantity) – (Actual Price × Actual Quantity)
= (Rs. 6 × 500 kg.) – (Rs. 8 × 450 kg.)
= Rs. 3,000 – Rs. 3,600 = Rs. 600 (A)
- (2) Material Price Variance = (Standard Price – Actual Price) × Actual Quantity
= (Rs. 6 – Rs. 8) × 450kg. = 900 (A)
- (3) Material Usage Variance = (Standard Quantity – Actual Quantity) × Standard Price
= (500 kg. – 450 kg.) × Rs. 6 = 300 (F)

1.5 marks + 1.5 marks + 2 marks for each variance

Answer – 1(b)

Time Allowed = 150 hours
Time Taken = 120 hours
Time Saved = 30 hours

- (i) Rowan Premium Plan (Rs.)
- | | |
|--|--------------|
| Normal wages (Rs. 10 × 120 hours) | 1,200 |
| D.A. for 15 days i.e. $\frac{120 \text{ hours}}{8 \text{ hours}}$ (Rs. 30 × 15 days) | 450 |
| Bonus: = $\frac{\text{Time saved}}{\text{Time allowed}} \times \text{Time taken} \times \text{Hourly rate}$ | |
| = $\frac{30 \text{ hours}}{150 \text{ hours}} \times 120 \text{ hours} \times 120 \text{ hours} \times \text{Rs. } 10$ | <u>240</u> |
| Total Wages | <u>1,890</u> |
- (ii) Emersion's Efficiency Plan
- | | |
|--|--------------|
| Normal wages (120 hours × Rs. 10) | 1,200 |
| D.A. (15 days × Rs. 30) | 450 |
| Bonus * = 45% × Rs. 1,200 | <u>540</u> |
| Total Wages | <u>2,190</u> |
| * Efficiency = $\frac{\text{Time Allowed}}{\text{Time Taken}} \times 100 = \frac{150}{120} \times 100 = 125\%$ | |
| Rate of Bonus up to 100% | = 20% |
| From of Bonus up to 100% | = <u>25%</u> |
| 2.5marks + 2.5 marks | <u>45%</u> |

Answer – 1(c)

Sales	= 12,00,000
Fixed Assets	= 10,00,000
Net Worth	= 8,00,000
Reserve & surplus	= 1,33,333
Capital	= 6,66,667
COGS	= 9,00,000
Closing Stock	= 1,00,000
<u>Stock</u>	
Current liab	= 0.50
∴ Current liabilities	= 2,00,000
Current Assets	= 3,50,000
Working Capital	= 1,50,000
Fixed Assets + Working Capital	= 11,50,000
∴ Loan = 11,50,000 – 8,00,000	= 3,50,000

$$CR - QR = 0.50$$

$$\frac{CA}{CL} - \left(\frac{CA - Stock}{CL} \right) = 0.50$$

$$\frac{CA - CA + Stock}{CL} = 0.50$$

$$= \frac{Stock}{CL} = 0.50$$

As per Question

$$\frac{Loan + PSC}{Equity} = 0.60$$

$$\frac{3,50,000 + PSC}{6,66,667 - PSC} = 0.60$$

or, 350000 + PSC = 400000 – 0.6 PSC

or, 1.6 PSC = 50,000

∴ PSC = 31,250

Balance Sheet

ESC (1 marks)	6,35,417	Fixed Asset	10,00,000
PSC (1 marks)	31,250	Stock (1 marks)	1,00,000
R&S	1,33,333	Debtors (1 marks)	1,50,000
Debt (1 marks)	3,50,000	Bank	1,00,000
Current liability	<u>2,00,000</u>		
	13,50,000		<u>13,50,000</u>

Answer – 1(d)

Calculation of Weighted Average Cost of Capital (WACC)

Source	Amount	Weight	Cost of Capital after tax	WACC
Equity Capital	50,00,000	0.5556	0.147	0.0817
10% Preference Capital	10,00,000	0.1111	0.100	0.0111
12% Debentures	30,00,000	0.3333	0.084*	0.0280
Total	90,00,000	1.0000		0.1208

* Cost of Debentures (after tax) = 12%(1 – 0.30) = 8.4% = 0.084

Weighted Average Cost of Capital = 0.1208 = 12.08%

Answer – 2(a)

Solution:-5

(i) **Annual Cost Statement of three vehicles (3 marks)**

	(Rs.)
Diesel $\{(1,34,784\text{km.} \div 4\text{km}) \times \text{Rs. } 10\}$ (Refer to Working Note 1)	3,36,960
Oil & sundries $\{(1,34,784\text{km.} \div 100\text{km.}) \times \text{Rs. } 25\}$	33,696
Maintenance $\{(1,34,784\text{km.} \times \text{Rs. } 0.25) + \text{Rs. } 6,000\}$ (Refer to Working Note 2)	39,696
Drivers' salary $\{(\text{Rs. } 2,000 \times 12 \text{ months}) \times 3 \text{ trucks}\}$	72,000
Licence and taxes (Rs. 5,000 \times 3 trucks)	15,000
Insurance	5,000
Depreciation $\{(\text{Rs. } 2,90,000 \div 10 \text{ years}) \times 3 \text{ trucks}\}$	87,000
General overhead	11,084
Total annual cost	6,00,436

(ii) **Cost per km. Run (1 marks)**

Cost per kilometre run = $\frac{\text{Total annual cost of vehicles}}{\text{Total kilometre travelled annually}}$ (Refer to Working Note 1)

$$= \frac{\text{Rs. } 6,00,436}{1,34,784 \text{ kms}} = \text{Rs. } 4.4548$$

(iii) **Freight rate per tonne km (to yield a profit of 10% on freight) (1 marks)**

Cost per tonne km. = $\frac{\text{Total annual cost of three vehicles}}{\text{Total effective tonnes kms. per annum}}$ (Refer to Working Note 1)

$$= \frac{\text{Rs. } 6,00,436}{5,25,312} = \text{Rs. } 1.143$$

Freight rate per tonne km. $\left(\frac{\text{Rs. } 1.143}{0.9}\right) \times 1 = \text{Rs. } 1.27$

Working Notes:

1. Total kilometre travelled and tonnes kilometre (load carried) by trucks in one year
(2 marks)

Truck number	One way distance in kms	No. of trips	Total distance covered in km per day	Load carried in km per day in tonnes	Total effective tonnes km
1	16	4	128	6	384
2	40	2	160	9	720
3	30	3	180	8	720
Total			468		1.824

Total kilometre travelled by three trucks in one year
(468 km. \times 24 days \times 12 months) = 1,34,784

Total effective tonnes kilometre of load carried by three trucks during one year
(1,824 tonnes km. \times 24 days \times 12 months) = 5,25,312

2. Fixed and variable component of maintenance cost: **(1 marks)**

3.

Variable maintenance cost per km = $\frac{\text{Difference in maintenance cost}}{\text{Difference in distance travelled}}$

$$= \frac{\text{Rs. } 46,050 - \text{Rs. } 45,175}{1,60,200 \text{ kms} - 1,56,700 \text{ kms}} = \text{Rs. } 0.25$$

Fixed maintenance cost = Total maintenance cost - Variable maintenance cost
= Rs. 46,050 - 1,60,200 kms \times Rs. 0.25 = Rs. 6,000

Answer – 2(b)

Calculation of Value of Firms 'A Ltd.' And 'B Ltd' according to MM Hypothesis Market Value of 'A Ltd' (Unlevered)

$$V_u = \frac{EBIT(1-t)}{K_e} = \frac{2,50,000(1-0.30)}{20\%} = \frac{1,75,000}{50\%} = 8,75,000 \quad \text{(1 marks)}$$

Market Value of 'B Ltd.' (Levered)

$$\begin{aligned} V_g &= V_u + TB \\ &= 8,75,000 + (10,00,000 \times 0.30) \\ &= 8,75,000 + 3,00,000 = 11,75,000 \quad \text{(1 marks)} \end{aligned}$$

(ii) Computation of Weighted Average Cost of Capital (WACC)

WACC of 'A Ltd.' = 20% (i.e. $K_e = K_o$)

WACC of 'B Ltd.'

	B Ltd. (Rs.)
EBIT	2,50,000
Interest to Debt holders	(1,20,000)
EBT	1,30,000
Taxes @ 30%	(39,000)
Income available to Equity Shareholders	91,000
Total Value of Firm	11,75,000
Less: Market Value of Debt	(10,00,000)
Market Value of Equity	1,75,000
Return on equity (K_e) = 91,000 / 1,75,000	0.52 (4 marks)

Computation of WACC B. Ltd

Component of Capital	Amount	Weight	Cost of Capital	WACC
Equity	1,75,000	0.149	0.52	0.0775
Debt	10,00,000	0.851	0.084*	0.0715
Total	11,75,000		(2 marks)	0.1490

$$* K_d = 12\%(1 - 0.3) = 12\% \times 0.7 = 8.4\%$$

$$\text{WACC} = 14.90\%$$

Answer – 3(a)

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

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

$$\text{Ordering Cost (Handling \& freight cost) (O)} = \text{Rs. } 370 + \text{Rs. } 380 = \text{Rs. } 750$$

$$\begin{aligned} \text{Carrying cost per unit per annum (C) i.e. inventory carrying cost + working capital cost} \\ = (\text{Rs. } 0.25 \times 12 \text{ months}) + \text{Rs. } 12 \\ = \text{Rs. } 15 \text{ per kg.} \end{aligned}$$

$$\text{E. O. Q.} = \sqrt{\frac{2AO}{C}} = \sqrt{\frac{2 \times 40,000 \text{ kg.} \times \text{Rs. } 750}{\text{Rs. } 15}} = 2,000 \text{ kg.}$$

(ii) Frequency of placing orders for procurement: **(2 marks)**

$$\text{Annual consumption (A)} = 40,000 \text{ kg.}$$

$$\text{Quantity per order (E.O.Q)} = 2,000 \text{ kg.}$$

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

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

(iii) Percentage of discount in price of raw materials to be negotiated: **(4 marks)**

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. 3,000 (4 order × Rs. 750)	Rs. 15,000 (20 orders × Rs. 750)
5. Inventory carrying cost (Average inventory × Carrying cost per unit)	Rs. 75,000 (10,000 kg. × $\frac{1}{2}$ × Rs. 15)	Rs. 15,000 (2,000 kg. × $\frac{1}{2}$ × Rs. 15)
6. Total Cost (4 + 5)	Rs. 78,000	Rs. 30,000

When order is placed on quarterly basis the ordering cost carrying cost increased by Rs. 48,000 (Rs. 78,000 – Rs. 30,000).

So, discount required = Rs. 48,000

Total annual purchase = 40,000 kg. × Rs. 80 = Rs. 32,00,000

So, percentage of discount to be negotiated = $\frac{\text{Rs. 48,000}}{\text{Rs. 32,00,000}} \times 100 = 1.5\%$

Answer – 3(b)

(i) Cost of Project 'M' (2 marks)

At 15% internal rate of return (IRR), the sum of total cash inflows = cost of the project i.e initial cash outlay

Annual cash inflows = 60,000

Useful life = 4 years

Considering the discount factor table @ 15%, cumulative present value of cash inflows for 4 years is 2.855 (0.869 + 0.756 + 0.658 + 0.572)

Hence, Total Cash inflows for 4 years for Project M is

60,000 × 2.855 = 1,71,300

Hence, Cost of the Project = 1,71,300

(ii) Payback Period (1 marks)

Payback period = $\frac{\text{Cost of the Project}}{\text{Annual Cah Inflows}} = \frac{1,71,300}{60,000} = 2.855 \text{ years}$

(iii) Cost of Capital (3 marks)

Profitability index = $\frac{\text{Sum of Discounted Cash inflows}}{\text{Cost of the Project}}$

1.064 = $\frac{\text{Sum of Discounted Cash inflows}}{1,71,300}$

∴ Sum of Discounted Cash inflows = 1,82,263.20

Since, Annual Cash Inflows = 60,000

Hence, cumulative discount factor for 4 years = $\frac{1,82,263.20}{60,000}$

From the discount factor table, at discount rate of 12%, the cumulative discount factor for 4 years is 3.038 (0.893 + 0.797 + 0.712 + 0.636)

Hence, Cost of Capital = 12%

(iv) Net Present Value (NPV) (2 marks)

NPV = Sum of Present Values of Cash inflows - Cost of the Project

= 1,82,263.20 – 1,71,300 = 10,963.20

Net Present Value = 10,963.20

Answer – 4(a)**Arnav Construction Ltd. Contract A/c
(November 1, 2012 to Oct. 31, 2013) (3 marks)**

Dr.

Dr.

Particulars	Amount (Rs.)	Amount (Rs.)	Particulars	Amount (Rs.)	Amount (Rs.)
To Materials issued		6,75,000	By Plant returned to store on 31/03/13 at cost	75,000	
To Labour paid	4,50,000		Less: Depreciation for 5 months @ 33.33%	(10,417)	64,583
Less: Prepaid wages	(25,000)	4,25,000	By I-I-P:		
To Plant purchased & issued		3,75,000	Work certified	20,00,000	
To Expenses paid	2,00,000		Work un-certified	75,000	20,75,000
Add: Outstanding exp	50,000	2,50,000	By Plant at site (Rs. 3,75,000 – Rs. 75,000)	3,00,000	
			Less: Depreciation @ 33.33%	1,00,000	2,00,000
To National profit c/d		6,89,583	By Material at site		75,000
		24,14,583			24,14,583
To Costing P & L A/c (Working Note-1)		1,48,580	By Notional Profit b/d		6,89,583
To Work-in-progress (Profit transferred to reserve)		5,41,003			
		6,89,583			6,89,583

**Arnav Construction Ltd. Contract A/c (November 1, 2012 to March 31, 2014)
(For computing estimated profit) (4 marks)**

Dr.

Cr.

Particulars	Amount (Rs.)	Particulars	Amounts (Rs.)
To Material issued (Rs. 6,75,000 + Rs. 12,37,500)	19,12,500	By Material at site	37,500
To Labour (Paid & Outstanding) (Rs. 4,25,000 + Rs. 5,87,500 + Rs. 2,500)	10,15,000	By Plant returned to stores on 31/03/13	64,583
To Plant purchased	3,75,000	By Plant returned to stores on 31/03/14	
To Expenses (2,50,000 + 3,25,000)	5,75,500	WDV on 31/10/2013	2,00,000
		Less: Depreciation for 5 months @ 33.33% (27,778)	1,72,222
To Estimated profit	3,34,305	By Contractee A/c	39,37,500
	42,11,805		42,11,805

Working Note: (1 marks)**Profit to be taken to Costing Profit & Loss A/c on prudent basis:**

$$\text{Estimated profit} \times \frac{\text{Cash received}}{\text{Work certified}} \times \frac{\text{Work certified}}{\text{Total Contract}}$$

$$\text{Rs. } 3,34,305 \times \frac{\text{Rs. } 17,50,000}{\text{Rs. } 20,00,000} \times \frac{\text{Rs. } 20,00,000}{\text{Rs. } 39,37,500} = \text{Rs. } 1,48,580$$

Answer – 4(b)

Income Statement

Particulars	Amount (Rs.)
Sales	75,00,000
Less: Variable cost (56% of 75,00,000)	42,00,000
Contribution	33,00,000
Less: Fixed costs	6,00,000
Earnings before interest and tax (EBIT)	27,00,000
Less: Interest on debt (@ 9% on 45 lakhs)	4,05,000
Earnings before tax (EBT)	22,95,000

$$(i) \quad ROI = \frac{EBIT}{\text{Capital employed}} \times 100 = \frac{EBIT}{\text{Equity+Debt}} \times 100$$
$$= \frac{27,00,000}{(55,00,000+45,00,000)} \times 100 = 27\% \quad \textbf{(1 marks)}$$

(ROI is calculated on Capital Employed)

(ii) ROI = 27% and Interest on debt is 9%, hence, it has a favourable financial leverage. **(1 marks)**

$$(iii) \quad \text{Capital Turnover} = \frac{\text{Net Sales}}{\text{Capital}}$$

$$\text{Or} \quad = \frac{\text{Net Sales}}{\text{Capital}} = \frac{75,00,000}{1,00,000} = 0.75$$

Which is very low as compared to industry average of 3. **(1 marks)**

(iv) Calculation of Operating, Financial and Combined leverages **(1 marks)**

$$(a) \quad \text{Operating Leverage} = \frac{\text{Contribution}}{\text{EBIT}} = \frac{33,00,000}{27,00,000} = 1.22 \text{ (approx)}$$

$$(b) \quad \text{Financial Leverage} = \frac{\text{EBIT}}{\text{EBT}} = \frac{27,00,000}{22,95,000} = 1.18 \text{ (approx)}$$

$$(c) \quad \text{Combined Leverage} = \frac{\text{Contribution}}{\text{EBT}} = \frac{33,00,000}{22,95,000} = 1.44 \text{ (approx)}$$

$$\text{Or} = \text{Operating Leverage} \times \text{Financial Leverage} = 1.22 \times 1.18 = 1.44 \text{ (approx)}$$

(v) Operating leverage is 1.22. So if sales is increased by 10%. **(1 marks)**

EBIT will be increased by 1.22×10 i.e. 12.20% (approx)

(vi) Since the combined Leverage is 1.44, sales have to drop by $100/1.44$ i.e. 69.44% to

bring EBT to Zero

$$\begin{aligned} \text{Accordingly, New Sales} &= 75,00,000 \times (1 - 0.6944) \\ &= 75,00,000 \times 0.3056 \\ &= 22,92,000 \text{ (approx)} \end{aligned}$$

Hence at 22,92,000 sales level EBT of the firm will be equal to Zero. **(2 marks)**

(vii) Financial leverage is 1.18. So, if EBIT increases by 20% then EBT will increase by $1.18 \times 20 = 23.6\%$ (approx) **(1 marks)**

Answer – 5(1)

Solution:

The essential features, which a good Cost Accounting System should possess, are as follows:

- 1) Informative and Simple:** Cost Accounting System should be tailor-made, practical, simple and capable of meeting the requirements of a business concern. The system of costing should not sacrifice the utility by introducing meticulous and unnecessary details.
- 2) Accuracy:** The data to be used by the Cost Accounting System should be accurate; otherwise it may distort the output of the system and a wrong decision may be taken.
- 3) Support from Management and subordinates:** Necessary cooperation and participation of executives from various departments of the concern is essential for developing a good system of Cost Accounting.
- (4) Cost-Benefit:** The Cost of installing and operating the system should justify the results.
- (5) Procedure:** A carefully phased programme should be prepared by using network analysis for the introduction of the system.
- (6) Trust:** Management should have faith in the Costing System and should also provide a helping hand for its development and success.

Any four points one mark for each point

Answer – 5(2)

When the cost and financial accounts are kept separately, it is imperative that these should be reconciled, otherwise the cost accounts would not be reliable. The reconciliation of two set of accounts can be made, if both the sets contain sufficient detail as would enable the causes of differences to be located. It is therefore, important that in the financial accounts, the expenses should be analysed in the same way as in cost accounts. It is important to know the causes which generally give rise to differences in the cost s& financial accounts.

(2 marks)

Motivation for reconciliation is :

- To ensure reliability of cost data
- To ensure ascertainment of correct product cost
- To ensure correct decision making by the management based on Cost & Financial data
- To report fruitful financial/cost data.

½(half) mark for each point

Answer – 5(3)

Limitations of Profit Maximisation objective of financial management.

- (a) Time factor is ignored.
- (b) It is vague because it is not cleared whether the term relates to economics profit, accounting profit, profit after tax or before tax.
- (c) The term maximization is also ambiguous
- (d) It ignore, the risk factor.

one mark for each point

Answer – 5(4)

Composition of Return on Equity using DuPont Model: There are three components in the calculation of return on equity using the traditional DuPont model- the net profit margin, asset turnover, and the equity multiplier. By examining each input individually, the sources of a company's return on equity can be discovered and compared to its competitors.

(a) Net Profit Margin: The net profit margin is simply the after-tax profit a company generates for each rupee of revenue.

Net profit margin = Net Income ÷ Revenue

Net profit margin is a safety cushion; the lower the margin, lesser the room for error.

(b) Asset Turnover: The asset turnover ratio is a measure of how effectively a company converts its assets into sales. It is calculated as follows:

Asset Turnover = Revenue ÷ Assets

The asset turnover ratio to be inversely related to the net profit margin; i.e., the higher the net profit margin, the lower the asset turnover.

(c) Equity Multiplier: It is possible for a company with terrible sales and margins to take on excessive debt and artificially increase its return on equity. The equity multiplier, a measure of financial leverage, allows the investor to see what portion of the return on equity is the result of debt. The multiplier is calculated as follows:
 Equity Multiplier = Assets ÷ Shareholders' Equity.

Calculation of Return on Equity

To calculate the return on equity using the Dupont model, simply multiply the three components (net profit margin, asset turnover, and equity multiplier.)

Return on Equity = Net profit margin × Asset turnover × Equity multiplier

one mark for each bold point

Answer – 6(a)

Solution			
(i) Comparison of alternative Joint-Cost Allocation Methods:			
(a) Sales Value at Split-off Point Method (1 marks)			
	Chocolate	Milk	Total
	powder liquor	chocolate	
	base	liquor base	
Sales value of products at split off	Rs. 2,99,250*	Rs. 5,55,750**	Rs. 8,55,000
Weights	0.35	0.65	1.00
Joint cost allocated	Rs. 2,49,375	Rs. 4,63,125	Rs. 7,12,500
	(Rs. 7,12,500 × 0.35)	(Rs. 7,12,500 × 0.65)	
*(3,000 lbs ÷ 200 lbs) × 20 gallon × Rs. 997.50 = Rs. 2,99,250			
** (5,100 lbs ÷ 340 lbs) × 30 gallon × Rs. 1,235 = Rs. 5,55,750			
Physical Measure Method (1 marks)			
	Chocolate powder	Milk chocolate	Total
	liquor base	liquor base	
Output	300 gallon*	450 gallon**	750 gallons
Weight	300/750 = 0.40	450/750 = 0.60	1.00
Joint cost allocated	Rs. 2,85,000 (Rs. 7,12,500 × 0.40)	Rs. 4,27,500 (Rs. 7,12,500 × 0.60)	Rs. 7,12,500
*(3,000 lbs ÷ 200 lbs) × 20 gallon = 300 gallon			
** (5,100 lbs ÷ 340 lbs) × 30 gallon = 450 gallon			
(C) Net Realisable Value (NRV) Method (2 marks)			
	Chocolate powder liquor	Milk chocolate liquor base	Total
	base		
Final sales value of production	Rs. 570000 (30000 lbs x Rs. 190)	Rs. 1211250 (5100 lbs x Rs. 237.50)	Rs. 1781250
Less: Separable costs	Rs. 302812.50	Rs. 623437.50	Rs. 926250
Net realizable value at split of point	Rs. 267187.50	Rs. 857812.50	Rs. 855000
Weight	0.3125 (267187.50 + 855000)	0.6875 (587812.5 + 855000)	1.00
Joint cost allocated	Rs. 222656.25 (Rs. 712500 × 0.3125)	Rs. 489843.75 (Rs. 712500 × 0.6875)	Rs. 712500
(d) Constant Gross Margin (%) NRV method (2 marks)			
	Chocolate powder	Milk chocolate liquor	Total
	Liquor base	Base	
Final sales value of production	Rs. 570000	Rs. 1211250	Rs. 1781250
Less: Gross margin* 8%	Rs. 45600	Rs. 96900	Rs. 142500
Cost of goods available for sale	Rs. 524400	Rs. 1114350	Rs. 1638750
Less: Separable costs	Rs. 302812.50	Rs. 623437.50	Rs. 926250
Joint cost allocated	Rs. 221587.50	Rs. 490912.50	Rs. 712500
*Final sales value of total production = Rs. 1781250			
Less: Joint and separable cost = Rs. 1638750 (Rs. 712500 + Rs. 926250)			
Gross Margin = Rs. 142500			

$$\text{Gross Margin (\%)} = \frac{\text{Rs. } 142500}{\text{Rs. } 1781250} \times 100 = 8\%$$

(iii) **Further processing of Chocolate Powder liquor base into Chocolate power**
(2 marks)

	(Amount in Rs.)
Incremental revenue {Rs. 570000 - (Rs. 997.50 x 300 gallon)}	270750
Less: Incremental costs	302812.50
Incremental operating income	(32062.50)
Further processing of Milk Chocolate liquor base into Milk Chocolate.	
	(Amount in Rs.)
Incremental revenue {Rs. 1211250 - (Rs. 12350 x 450 gallon)}	655500
Less: Incremental costs	623437.50
Incremental operating income	32062.50
The above computations show that Pokemon Chocolates could increase operating income by Rs. 32062.50 if chocolate liquor base is sold at split off point and milk chocolate liquor base is processed further.	

Answer – 6(b)

Advise to the Hospital Management

Determination of Cash inflows

Sales Revenue

Less: Operating Cost 40,000

7,500

32,500

Less: Depreciation (80,000 - 6,000)/8 9,250

23,250

Net Income 23,250

6,975

Tax @ 30%

16,275

Earnings after Tax (EAT) 16,275

9,250

Add: Depreciation

25,525

Cash inflow after tax per annum 25,525

12,000

Less: Loss of Commission Income

13,525

Net Cash inflow after tax per annum 13,525

(2 marks)

In 8th Year :

New Cash inflow after tax 13,525

6,000

Add: Salvage Value of Machine

19,525

Net Cash inflow in year 8

(2 marks)

Calculation of Net Present Value (NPV) (2 marks)

Year	CFAT	PV Factor @10%	Present Value of Cash inflows
1 to 7	13,525	4.867	65,826.18
8	19,525	0.467	9,118.18
			74,944.36
Less: Cash Outflows	NPV		80,000.00
			(5,055.64)

$$\text{Profitability Index} = \frac{\text{Sum of discounted cash inflows}}{\text{Present value of cash outflows}} = \frac{74,944.36}{80,000} = 0.936 \quad \text{(1 marks)}$$

Advise: Since the net present value is negative and profitability index is also less than 1, therefore, the hospital should not purchase the diagnostic machine. **(1 marks)**

Answer – 7(1)

Journal Entries in Cost Books Maintained on non-integrated system

			(Rs.)	(Rs.)
(i)	Work-in-Progress Ledger Control A/c Factory Overhead Control A/c To Stores Ledger Control A/c (Being issue of materials) <u>(1 marks)</u>	Dr. Dr.	5,50,000 1,50,000	7,00,000
(ii)	Work-in-progress ledger Control A/c Factory Overhead control A/c To Wages Control A/c (Being allocation of wages and salaries) <u>(1 marks)</u>	Dr. Dr.	2,00,000 40,000	2,40,000
(iii)	Factory overhead Control A/c To Costing Profit & Loss A/c (Being transfer of over absorption of overhead) <u>(1 marks)</u>	Dr.	20,000	20,000
	Costing Profit & Loss A/c To Administration Overhead Control A/c (Being transfer of under absorption of overhead) <u>(1 marks)</u>	Dr.	10,000	10,000

Answer – 7(2)

The following steps are useful for minimizing labour turnover:

- Exit interview. An interview to be arranged with each outgoing employee to ascertain the reasons of his leaving the organization.
- Job analysis and evaluation to ascertain the requirement of each job.
- Organization should make use of a scientific system of recruitment, placement and promotion for employees.
- Organization should create healthy atmosphere, providing education, medical and housing facilities for workers.
- Committee for settling workers grievances.

Any four points one mark for each point

Answer – 7(3)

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.) **(2 marks)**

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.

½(half) mark for each point

Answer – 7(4)

- 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.

one mark for each point