

## CAF440:FINANCIAL MANAGEMENT - II

### A Part

1. What is the Meaning of Working Capital Management? Analyse the factors determining Working Capital requirements.
2. What is Business Plan? Explain the Essential Elements of a Business Plan.
3. What is Venture Capital Financing? Evaluate the development of Venture Capital in India.
4. ABC Ltd. Has ₹ 20,00,000 equity share capital of ₹ 100 each. It requires 20,00,000 for expansion. EBIT is ₹ 5,00,000. The company has following plans
  1. Issue equity share of ₹ 50
  2. Issue of Equity Share of ₹ 50 till 45% and the remaining 55% by issue of 5% debentures
  3. Issue 6% debentures
  4. Issue equity share of ₹ 40 till 45% remaining 55% by issue of 5% preference share of ₹ 10 each

You are required to calculate EPS, ROE and ROI

5. Red Chilly Ltd. Needs ₹20,00,000 for the installation of the plant. The plant is expected to yield annual earnings before interest and tax of ₹3,00,000. the management is considering the following alternatives for raising the amount;
  1. Issuing equity shares of ₹10,00,000 and debentures of ₹10,00,000
  2. Issuing equity shares of ₹5,00,000 and debentures of ₹15,00,000
 The market price of the shares is ₹200 per share. The debt capital is raised at the following rate of interest
  - a. Up to ₹10,00,000 at 10%
  - b. Over ₹10,00,000 to ₹15,00,000 at 15%
  - c. Assuming a tax rate of 35% ascertain EPS and determine the best alternative.
6. For a project under consideration, the following figures are forecasted. Determine the range of operating profit

Particulars	Optimistic (in ₹)	Expected (in ₹)	Pessimistic (in ₹)
Selling Price per unit	25	22	20
Material Cost / unit	6	7	8
Labour Cost / unit	7	8	9
Fixed Cost	2500	3000	3500
Unit Sold (No)	5000	4000	3000

7. Garlic Ltd. Need ₹50,00,000 for installation of the new factory. The new factory is expected to yield annual earnings before interest and tax of ₹10,00,000. in choosing a financial plan, Garlic Ltd. has an objective of maximizing earnings per share. It is considering the possibilities of issuing ordinary shares and raising debt of ₹5,00,000 or 20,00,000 or 30,00,000. The current market price per share is ₹300 and is expected to draw ₹250 if the funds are borrowed in excess of ₹20,00,000. funds can be raised at the following rates
  - a. Up to ₹5,00,000 at 10%
  - b. Over ₹5,00,000 to ₹ 20,00,000 at 15%
  - c. Over ₹20,00,000 at 20%
 Assume a tax rate of 50%, advise the company.
8. MNO Company has currently an equity capital structure consisting of ₹30,000 equity shares of ₹100 each the management is planning to raise another 25,00,000 to finance a major program of expansion and is considering 3 alternatives of financing.

1. To issue 25,000 E.S of ₹100 each
2. To issue 25,000 6% debentures of ₹100 each
3. To issue 25,000 6% preference shares of ₹100 each

The company is expecting EBIT will be ₹8,00,000 assuming a tax rate of 50% determine the earnings per share in each alternative and comment which alternative is best and why.

9. XYZ Company has currently an equity capital structure consisting of 30,000 equity shares of ₹100 each. The management is planning to raise another 50,00,000 to finance a major program of expansion and considering 3 alternative methods of financing.
  1. Issue of 50,000 equities of ₹100 each
  2. To issue 50,000 10% debentures of ₹100 each
  3. To issue 50,000 10% preference share of ₹100 each

The company expected EBIT will be ₹16,00,000 assuming a corporate tax rate of 50%. Determine the EPS in each alternative and comment which alternative is best and why.

10. Being Human Ltd. Has an equity share capital of ₹20,00,000 of ₹10 each. It has an expansion program requiring an investment of ₹ 10,00,000. The management is considering the following alternative for raising the amount.
  1. Issue of 1,00,000 equity share of ₹10 each
  2. Issue of 10,000, 8% preference share of ₹100 each
  3. Issue of 10,000, 8% debentures of ₹100 each

The company's EBIT is 8,00,000, the rate of corporate tax is 30%. Ascertain EPS and determine the best alternative.

11. ABC Ltd. Has ₹ 20,00,000 equity share capital of ₹ 100 each. It requires 20,00,000 for expansion. EBIT is ₹ 5,00,000. The company has following plans
  1. Issue equity share of ₹ 50
  2. Issue of Equity Share of ₹ 50 till 50% and the remaining 50% by issue of 5% debentures
  3. Issue 6% debentures
  4. Issue equity share of ₹ 40 till 50% remaining 50% by issue of 5% preference share of ₹ 10 each

You are required to calculate EPS, ROE and ROI

12. Reliance Ltd. has an equity share capital of ₹ 1,00,00,000 of ₹10 each. It has an expansion program and requiring an investment of ₹2,00,00,000 the management is considering the following alternatives for raising this amount.
  1. Issue of ₹1,00,00,000 equity shares of ₹10 each and the balance is 8% preference shares of ₹100 each.
  2. Issue of ₹1,00,00,000, 8% preference shares of ₹100 each, and the balance in 12% debentures of ₹100 each.

The company's EBIT is ₹1,00,00,000, the rate of tax is 30%. Ascertain the EPS and determine the best alternative.
13. ABC Ltd. Needs ₹25,00,000 for the installation of a plant. The plant is expected to yield another EBIT of ₹5,00,000. the company has an objective of maximizing its EPS considering the possibilities of issuing equity shares and raising debt of ₹25,00,000 or 10,00,000 or 15,00,000. the current market price per share is ₹150 the funds can be raised at the rate of;
  - a. Up to ₹2,50,000 at 20%
  - b. 2,50,000 to 10,00,000 at 25%
  - c. Over 10,00,000 at 30%

Advice the company which alternative is the best and why? Assume the tax rate at 55%
14. ITC Ltd. Need ₹20,00,000 for installation of new factory. The new factory is expected to yield annual earnings before interest and tax of ₹13,00,000. in choosing a financial plan, Garlic Ltd. has an objective of maximizing earning per share. It is considering the possibilities of issuing ordinary shares and raising debt of ₹5,00,000 or 20,00,000 or 30,00,000.

The current market price per share is ₹200 and expected to draw ₹150 if the funds are borrowed in excess of ₹20,00,000. funds can be raised at the following rates

- a. Up to ₹5,00,000 at 15%
- b. Over ₹5,00,000 to ₹ 20,00,000 at 25%
- c. Over ₹20,00,000 at 30%

Assume a tax rate of 50%, advice the company

15. Two projects are under the consideration of a small scale industry. The projected data for both the projects are given below. Calculate ROI

Particulars	Optimistic (in ₹)	Expected (in ₹)	Pessimistic (in ₹)	Optimistic (in ₹)	Expected (in ₹)	Pessimistic (in ₹)
Sales	10,000	9,000	8,000	11,000	9,000	8,000
Selling Price	20	18	16	20	16	15
Material cost Per unit	1	2	3	1	2	3
Labour Cost Per unit	2	3	4	1	3	4
Fixed Cost	40,000	45,000	50,000	40,000	50,000	60,000
Capital	1,60,000	1,70,000	1,50,000	1,50,000	2,00,000	2,50,000

16. XYZ Company has currently an equity capital structure consisting of 30,000 equity shares of ₹100 each. The management is planning to raise another 50,00,000 to finance a major program of expansion and considering 3 alternative methods of financing.

1. Issue of 50,000 equities of ₹100 each
2. To issue 50,000 10% debentures of ₹100 each
3. To issue 50,000 10% preference share of ₹100 each

The company expected EBIT will be ₹16,00,000 assuming a corporate tax rate of 50%. Determine the EPS in each alternative and comment which alternative is best and why.

17. DS Limited needs ₹ 20,00,000 to build a new factory which will be yield EBIT of ₹ 5,00,000 per annum. The company has to select from 3 financial plans.

Particulars	Equity	Debts	Interest on Debt
Plan A	75%	25%	12%
Plan B	50%	50%	14%
Plan C	25%	75%	10%

The first plan per share is ₹50. second plan is ₹40, third plan is ₹ 30 per share. Assume 30% tax rate. Determine EPS, ROI, ROE for each plan.

18. APP Ltd. has a total sales of ₹20,00,000. variable cost comprises material cost amounting to 30% of sales, and labour cost accounting for 20% of sales. Fixed cost amounts to ₹2,50,000. calculate EBIT. The company is apprehensive of any one of the following developments;
- a. 20% increase in sales
  - b. 10% increase in material cost
  - c. 20% decrease in labour cost

Estimate the effect of each of these developments on the operating profit.

19. Being Human Ltd. Has an equity share capital of ₹20,00,000 of ₹10 each. It has an expansion program

requiring an investment of ₹ 10,00,000. The management is considering the following alternative for raising the amount.

1. Issue of 1,00,000 equity share of ₹10 each
2. Issue of 10,000, 8% preference share of ₹100 each
3. Issue of 10,000, 8% debentures of ₹100 each

The company's EBIT is 8,00,000, the rate of corporate tax is 30%. Ascertain EPS and determine the best alternative.

20. The operating details of a firm are: sales ₹ 80,000, Material cost ₹ 10,000, Labour Cost ₹ 20,000 and Fixed cost ₹ 20,000.  
Prepare a statement of income for the following eventualities.
1. 25% increase in material cost
  2. 50% increase in labour cost
  3. 25% decline in sales
  4. 40% increase in fixed cost
21. ABC Ltd. Needs ₹25,00,000 for the installation of a plant. The plant is expected to yield another EBIT of ₹5,00,000. the company has an objective of maximizing its EPS considering the possibilities of issuing equity shares and raising debt of ₹250,000 or 10,00,000 or 15,00,000. the current market price per share is ₹150 the funds can be raised at the rate of;
- a. Up to ₹2,50,000 at 10%
  - b. 2,50,000 to 10,00,000 at 15%
  - c. Over 10,00,000 at 20%
- Advice the company which alternative is the best and why? Assume the tax rate at 35%.

22. Manhattan Company's latest balance sheet is as follows

Liabilities	Amount (₹)	Assets	Amount (₹)
Equity Share Capital (₹10 per share)	60,000	Net Fixed Assets	1,50,000
10% Long Term Debt	80,000	Current Assets	50,000
Retained Earning	20,000		
Current Liabilities	40,000		
	2,00,000		2,00,000

The company's total assets turnover ratio is 3. its fixed operating costs are ₹ 1,00,000 and variable cost ratio is 40%. The income tax rate is 50%.

(i) Calculate for the company all the three types of leverages

(ii) Determine the likely level of EBIT if EPS is [A] ₹ 1 [B] ₹ 3 [C] ₹ 0 [D] ₹ 4 [E] ₹ 2

23. Adithya Ltd. Has at present an annual sales level of 10,000 units at ₹300 per unit. The variable cost is ₹200 per unit and fixed cost amount to ₹ 3,00,000 per annum. The present credit period allowed by the company is 1 month, the company is considering a proposed to increase the credit period 2 months and 3 months and as made the following estimates.

Particulars	Existing	Proposed	
Existing Credit Period	1 month	2 month	3 months
Increase in sales	Nil	15%	30%
Bad debts	1%	3%	5%

There will be an increase in fixed cost by ₹50,000 an account of increase in sales beyond 25% of present level. The company require free tax return of 20% on investment in receivable.

24. Calculate operating leverage and financial leverage under situations A, B, and C and financial plan I, II, and III respectively from the following information relating to the operation and capital structure of ABD

company for producing additionally 800 units. Also, find out the combination of operational and financial leverages, which gives the highest and least value. How are these calculations useful to the finance manager of a company?

Selling price per unit ₹ 30

Variable cost per unit ₹ 20

Fixed cost:- Situation A - ₹ 2,000, Situation B - ₹ 4,000, Situation C - ₹6,000.

Capital Structure: F inancial Plant I Financial Plan II Financial Plan III

Equity ₹ 10,000 ₹ 15,000 ₹ 5,000

Debt ₹ 10,000 ₹ 5,000 ₹5,000

Cost of Debt is 12%.

25. DDLG Ltd. Is planning to set up an operation for which funds needed are ₹ 140,000. it has the plans to raise the funds in any of the following finance options calculate operating Leverage.

Option A Raising all the funds by issue of equity shares of ₹ 10 each

Option B Raising ₹ 70,000 through issue of equity shares and the remaining ₹ 70,000 through a 15% Long Term Loans from financial institution.

Option C raising ₹ 40,000 through issues of equity shares, ₹ 50,000 through issue of 12% preference shares of ₹ 100 each and the remaining amount by way of 15% long term loan from a finance institution.

Identify the plan that yields highest EPS assuming tax rate of 50% and an EBIT of ₹ 80,000.

26. ABC company is making sales of ₹16,00,000 and it extends a credit of 90 days to its customers how ever in order to overcome the financial difficulties it is considering to changes in credit policy the proposed terms of credit and expected sales are given below:

Policy Terms Sales

1 75 days 15,00,000

2 60 days 14,50,000

3 45 days 14,25,000

4 30 days 13,50,000

5 15 days 13,00,000

The firm as variable cost of 80% and a fixed cost of ₹1,00,000. the cost of capital is 15% evaluate different proposed policies and which policy should be adopted (360 days in a year)

27. Eagle Industries Ltd. Presents the following details from which you are required to compute operating leverage, financial leverage and combined leverage. Also determine EPS

Financial Details:

Equity Shares of ₹ 10 each ₹ 5,00,000

15% Debentures of ₹ 100 each ₹ 10,00,000

Operational Details:

Sales Price per unit ₹ 15

Variable Cost per unit ₹ 8

Fixed Cost ₹ 2,00,000

Tax rate 35%

Assume the output to be 1 lakh units. What will be the leverages and EPS, if the output goes up to 2 lakh units and 2,50,000 units.

28. Calculate the 3 leverages from the following data for an output of 20,000 units.

Selling price per unit ₹ 80, Variable cost per unit ₹30, Fixed Cost ₹ 2,00,000, interest on loan ₹1,00,000, preference dividend ₹ 1,50,000, tax rate 50%.

Assume 40,000 equity shares of ₹10 each, calculate EPS. Using leverages, calculate the impact on EBIT

and EPS for a 50% increase in sales

29. Shree Limited has annual sales of ₹ 5,00,000 and average collection period of 30 days. It is considering a more liberal credit policy. If the credit period is extended, the company expects that sales and bad debts losses will increase in the following manner;

Credit Policy	Increase in credit period	Increase in sales	Bad debts percent of total sales
A	10 days	25,000	1.2
B	15 days	35,000	1.5
C	30 days	60,000	1.8

The selling price per unit is ₹2.0 average cost per unit ₹ 1.50 and variable cost per unit is ₹ 1.20. if current bad debt loss is 1% of sales and required rate of return on investment is 20%. Which credit policy should be undertaken? Ignore taxes and assume 360 days in a year

30. Fantasy Manufacturing Ltd. offers its cost sheet and balance sheet as on 31.12.2020, calculate the leverages and EPS by preparing a statement of Income.

Cost Sheet for the year ended 31.12.2020

Particulars	
Material Cost	
+Labour Cost	
Prime Cost	
+Manufacturing Overhead	
Works Cost	
+Office & Administration OH	
Cost of Production	
+Selling & Distribution OH	
Cost of Sale	
Profit	
Sales	

Balance Sheet as on 31-12-2020

Sources of Fund	Amount (₹)	Application of Funds	Amount (₹)
Equity Share Capital	2,50,000	Fixed Assets	5,20,000
10% Preference Shares	2,40,000	Current Assets	1,80,000
10% Debentures	1,00,000		
Current Liabilities	1,10,000		
	7,00,000		7,00,000

Assume a tax rate of 50%

31. Savitha limited has current sales of ₹ 12,00,000 and average collection of 30 days. The company is considering of liberalising its credit policy. If the collection period is extended the sales and bad debts are expected to increase in the following manner;

Credit Policy	Increase in collection period	increase in Sales	Percentage of bad debts losses
A	15	1,00,000	1.2
B	30	1,20,000	1.5
C	45	1,46,000	2.0

The company sells its products for ₹ 10 per unit. Average cost at current level of sales is 90% of sales and variable cost is 80% of sales. If the current bad debts loss is 1% of sales and the required return is 16% which credit policy should be pursued?

32. The financial and operating details of three companies A, B and C furnished below. Based on financial leverage and EPS analyse the risk return profile of the three companies.

Particulars	A	B	C
Equity share of ₹ 10 each	80,000	30,000	20,000
10% Debentures	-	50,000	30,000
12% preference shares	-	-	30,000

Sales of the three companies are ₹ 175,000 each and the total cost (Fixed Cost and Variable Cost) is ₹ 1,00,000. applicable tax rate is 50% for all the 3 companies.

33. The capital structure of the progressive corporation consists of an ordinary share capital of ₹ 10,00,000 (shares of ₹ 100 per share) and ₹ 10,00,000 of 10% debentures. Sales increased by 20% from 1,00,000 units to 1,20,000 units. The selling price is ₹ 10 per unit. Variable cost per unit amounts to ₹ 6 and fixed expenses amounts to ₹ 2,00,000. income tax rate applicable is 50%. You are required to calculate the following:
1. The EPS
  2. The operating leverage and financial leverage at 1,00,000 units and 1,20,000 units. Comment on the behaviour of operating and financial leverage in relation to increase in production.
34. The percentage of sales turnover of a company is ₹50,00,000. the unit sales price is ₹2000. The variable cost is ₹120 per unit and fixed cost amount to ₹6,25,000 per annum. The present credit period of 30 days is proposed to be extended to either 60 days or 90 days for customers. The expectations are as follows;
- | Credit period           | 30 days | 60 days | 90 days |
|-------------------------|---------|---------|---------|
| Increase in sales       | NIL     | 10%     | 30%     |
| Percentage of bad debts | 1%      | 2%      | 5%      |

Fixed cost will increase by ₹ 75,000 when sales will increase by 30%. The company requires a free tax return on investment at 20%

You are required to evaluate the credit policy and suggest the best one. Ignore tax and assume 360 days in a year.

35. a) A company has an installed capacity of 20,000 units. It expects to sell the products at ₹ 20 per units. Material cost is expected to be ₹ 4 per unit, while labour cost is expected to be ₹ 10 per unit. The fixed cost is estimated to be ₹ 75,000. Calculate the Operating Leverage for 50%, 75%, and 100% utilisation of the installed capacity.
- b) For the year ended 31-03-2020, Sun Pharma Ltd. Had an earning before interest and tax of ₹ 70,000 and an equity capital of ₹ 140,000. its annual interest burden was ₹ 10,000. It issued 500, 10% preference shares of ₹ 100 each at par and its EBIT for the year ending 31-03-2021 went up to ₹ 1,10,000. Calculate financial leverage for the two situations i.e., before and after the issue of preference shares. Also discuss the effect of issue of preference shares on the financial leverage of the firm. Assume a tax rate of 30%.
36. Calculate financial leverage and operating leverage under situations A and B and under financial plan I and II respectively from the following relating to the operations and capital structure of Robert ltd. Draw your inference on the result obtained.

Installed Capacity 1,000 units  
 Actual Production and Sales 800 units  
 Selling price per unit (₹ in 000) 20  
 Variable Cost per unit (₹ in 000) 15  
 Fixed Cost (₹ in 000) situation A ₹ 800 and situation B ₹1,500  
 Capital Structure:
 

	Financial Plan I	Financial Plant II
Equity Share Capital (₹ in 000)	5,000	7,000
Debt (₹ in 000)	5,000	2,000

 Cost of Debt @ 10%

37. XYZ intends to relax its credit policy you are required to evaluate two proposal given and suggest the best policy.  
 Currently the firm has annual credit sales of 5,00,000 units. The average collection period is 2 months. The present average cost per unit is ₹8. the variable cost and sales price per unit is ₹6 and ₹10 respectively. The expected rate of return is 15%. The current level of bad debts is 2%.  
 Proposed policy and expected implications are as follows;  
 Policy 1- credit period to be decreased by 1 month. Sales and bad debts are likely to decrease by 10% and 1%  
 Policy 2 – credit period to be increased by 1 month . Sales and bad debts are likely to be increased by 20% and 2% respectively.
38. Comparative figures of two firms A and B are given below. Calculate operating, financial and combined leverage.
- | Particulars   | Firm A       | Firm B       | Firm C       |
|---------------|--------------|--------------|--------------|
| Sales         | ₹ 8,00,000   | ₹ 11,00,000  | ₹14,00,000   |
| Variable Cost | 30% of sales | 20% of sales | 25% of sales |
| Fixed Cost    | 2,00,000     | 4,00,000     | 6,00,000     |
| Interest      | ₹ 40,000     | ₹ 60,000     | 75,000       |
| Tax rate      | 30%          | 30%          | 30%          |
39. Alkaline Batteries Ltd. Estimates a sales of 20,000 units at ₹ 20 per unit. The variable cost is expected to be ₹ 5 per unit. While fixed cost is likely to be ₹ 1,00,000, interest payable would be ₹ 50,000. the company is in 50% tax bracket. Calculate the Operating Leverage. Financial Leverage and Combined Leverage.  
 What effect a 25% increase in sales or a 30% decrease in sales will have on leverages?
40. A Company needs ₹ 5,00,000 for construction of a new plant. The following 3 financial plans are feasible.  
 A] The company may issue 50,000 equity shares at ₹ 10 per share  
 B] The company may issue 25,000 equity shares of ₹ 10 per share  
 C] The Company may issue 25,000 equity shares at ₹ 10 per share, and 2,500 preference shares at ₹ 100 per share bearing 8% rate of dividend.  
 If the company's earning before interest and taxes are ₹ 10,000, ₹ 20,000 ₹ 40,000, ₹ 60,000 and ₹ 1,00,000, what are the earning per share under each of the three financial plans. Which alternative would you recommend any why? Assume a corporate tax rate of 50%.
41. ICT Ltd. Has an equity share capital of ₹ 7,00,000 divided into equity shares of ₹ 10 each. It also enjoys an EBIT of ₹ 1,50,000. it wants to expand its capacity for which it requires additional long term funds at ₹ 8,00,000. it has four alternative plans. The future EBIT is estimated to be ₹ 2,50,000 and the tax rate is expected to be 40%. The four alternative plans are given below  
 1.All equity  
 2.All the additional fund by issue of 10% debentures



3. ₹ 4 lakhs by issue of equity shares and the remaining ₹ 4 lakhs by issue of 10% debentures.

4. ₹ 2 lakhs by issue of equity shares, ₹ 3 lakh by issue of 15% preference shares, and the remaining ₹ 3 lakh by issue of 10% debentures.

Calculate all the leverages and EPS for the alternative plans.

42. The annual sales of a company was 20,000 units at ₹ 200 per month. The variable cost is ₹ 125 per unit and fixed cost amount ₹ 2,50,000. the company considering to extent present credit period of 30 days to 60 days or 90 days with the following estimates.

Credit Period	30 days	60 days	90 days
Increase in Sales	-	10%	30%
Percentage of Bad debts	1%	2%	5%

Fixed cost will increase by ₹ 50,000 when the sales is increase by more than 25%.

The cost of capital is 20%

Suggest the best policy.

43. MRD Ltd. Manufactures polyurethane valves for industrial usage. Calculate all the leverages from the following data of the company.

Utilized capacity 10,000 units

Variable cost ₹ 46 per unit

Interest on loan ₹ 1,00,000

Preference dividend ₹ 50,000

Selling Prices ₹ 116 per unit

Fixed Cost of ₹ 3,00,000

Tax rate 50%. what will be the leverage and EPS if the 25% increase in utilised capacity?.

44. AB Ltd. Needs ₹ 10,00,000 for expansion. The expansion is expected to yield an annual EBIT of ₹ 1,60,000. in choosing a financial plan, AB Limited has an objective of maximising earnings per share. It is considering the possibility of issuing equity shares and raising debt of ₹ 1,00,000 or ₹ 4,00,000 or ₹ 6,00,000. the company's market price per share is ₹ 25 and is expected to drop to ₹ 20, if funds borrowed is in excess of ₹ 5,00,000. funds can be borrowed at the rates indicated below;
- Up to and including ₹ 1 lakh – 8%
  - Over ₹ 1 lakh and up to ₹ 5 lakh – 12 %
  - Over ₹ 5 lakh – 18%

Assume tax rate @ 50%

Find out the financial leverage and determine the earning per share for the 3 financial alternatives

45. CDC Ltd. Has an annual sales of ₹ 5,00,000 and an average collection period of 30 days. It is considering a more liberal credit policy. If the credit period is extended, the company expects that the sales and bad debt losses in the following manner.

Credit Policy	Increase in Credit Period	Increase in Sales	Percentage of bad debts to total sales
M	10 days	25,000	1.2
N	15 days	35,000	1.5
P	30 days	60,000	1.8
Q	42 days	80,000	2.2

The selling price per unit is ₹ 2 average cost per unit is ₹ 1.50 and variable cost per unit is ₹ 1.20. if the current bad debt loss is 1% of sales and the required rate of return is 20%. Which credit policy should be undertaken. Ignore tax and assume 360 days in a year.

46. Babylon Company makes explosives. During the preceding years. It earned ₹ 6,00,000 after taxes. The company is in a 40% tax bracket. It had no debt outstanding at year-end, and it has 1,00,000 shares of common stock outstanding. At the beginning of the current year, it finds that it needs to borrow ₹ 5,00,000 at an interest rate of 20% in order to expand its operation.
- (a) What is the earning per share before and after financing if EBIT remains the same?  
 (b) What are the absolute and percentage increase in earning per share if EBIT increases by 50%
47. The company X is planning to relax its credit policy to motivate customers. It is expected that the variable cost will remain 75% of sales. The increase sales are expected to sold on credit for the perceived increase in risk in liberalising the credit terms the company requires higher required returns. If the following is the projected information which credit policy should the company perceived (Assume 360 days in a year).

Credit Policy	Required Return	Collection Period	New Sales
A	20%	40 days	3,00,000
B	25%	45 days	4,00,000
C	32%	55 days	5,00,000
D	40%	70 days	6,00,000

48. From the following forecast of income and expenditure prepare a Cash Budget for the month of April to Jun 2021

Months	Sales	Purchases	Wages	Exps.
Feb.	1,20,000	50,000	15,000	10,000
Mar.	1,00,000	60,000	12,000	8,000
Apr.	1,50,000	75,000	10,000	12,000
May	1,30,000	1,00,000	18,000	10,000
June	1,70,000	1,25,000	15,000	13,000

### Adjustments

1. 20% of sales are made on cash basis a balance credit sale realise equally in 2 sub sequent months
  2. Purchases- these are paid in the month following the month of supply
  3. 50% of the Wages are paid in the next month
  4. Expenses are paid after one month
  5. Rent ₹ 2,500 per month to be paid in advance for 3 months in the month of April
  6. Cash balance on 1st April 2021 ₹ 50,000
  7. Income from investment of ₹ 15,000 received quarterly April, July etc.
  8. Income tax – 1st instalment of advance tax ₹ 25,000 due on or before 15th June
49. From the following budgetary data forecast the cash position at the end of April, May, and June.

Months	Sales	Purchases	Wages	Miscellaneous
February	1,20,000	84,000	10,000	7,000
March	1,30,000	1,00,000	12,000	8,000
April	80,000	1,04,000	8,000	6,000
May	1,16,000	1,06,000	10,000	12,000
June	88,000	80,000	8,000	6,000

### Additional information:

1. Credit period allowed by supplier is 2 months and allowed to customers is 1 month
2. All expenses are paid in the current month

3. Income tax paid in advance for the month of April is ₹ 25,000
4. Income from investment is ₹ 5,000 is realized in the month of June
5. Cash in hand ₹ 50,000

50. D Traders gives the following information.

Month	Sales	Purchases	Wages	Manufacturing Expenses	Overhead
February	5,60,000	4,10,000	36,000	16,000	12,000
March	6,20,000	5,00,000	40,000	18,000	15,000
April	7,40,000	5,60,000	52,000	25,000	16,000
May	6,80,000	5,20,000	48,000	22,000	14,000
June	8,30,000	6,00,000	60,000	30,000	20,000

1. Cash in hand on 1st April 2020 ₹ 72,000
2. Cash sales is 20% of total sales, 50% of credit sales collected in the following month of sales and the remaining balance in the next month
3. Sales commission @ 5% on sales to be paid in the next month of sales made
4. Cash purchased is 10% and 90% is on credit
5. Creditors are to be paid in the following month of supply
6. Lag in Payment of Wages is half month, Manufacturing & Overhead expenses are paid in the same month
7. Dividend @ 10% on paid up capital of ₹ 3,00,000 is payable in the month of May

Prepare a cash budget for 3 months from 1st April 2020- June 2020

51. Aravind Traders gives the following information and requests you to prepare a cash budget for April to June 2020.

Month	Sales	Purchase	Wages	Mnfg. Exp.	Other Exp.
February	3,50,000	2,50,000	29,000	10,000	12,000
March	4,20,000	3,00,000	30,000	12,000	16,000
April	2,60,000	3,20,000	36,000	14,000	18,000
May	2,50,000	3,40,000	32,000	16,000	20,000
June	2,80,000	3,00,000	30,000	18,000	20,000

1. Cash in hand on 1st April 2020 ₹ 1,20,000 as estimated
2. 50% of the sales are cash sales and 2% discount is allowed on credit sales. 50% of the debtors paid in the month following sales and the balance in the next month
3. Sales commission @ 5% on sales is to be paid to the salesman in the month following sales.
4. Creditors are paid in the month following the month of supply
5. Lag in payment of manufacturing expenses half month and other expenses  $\frac{1}{4}$  th month
6. Wages are paid on the first working day of next month
7. Dividend @ 20% on the paid-up capital of ₹ 2,00,000 is payable in the month of May
8. ₹ 1,50,000 is expected to be received as deposit from distributors in May
9. Loan instalment of ₹ 60,000 is payable on quarterly basis in April, July etc.

52. From the following budgeted data forecast the cash position for 6 months ended 31-12-2020.

Month	Sales	Purchases	Wages	Prodn. OH	Selling & D OH
June	4,00,000	3,00,000	60,000	25,000	8,000
July	4,20,000	3,10,000	70,000	28,000	7,800
August	5,40,000	3,80,000	74,000	32,000	10,000
September	5,60,000	4,00,000	76,000	36,000	11,000
October	5,80,000	4,00,000	78,000	40,000	12,000

November	5,40,000	4,20,000	80,000	42,000	12,400
December	5,20,000	4,10,000	76,000	42,800	12,800

1. Cash balance on 1st June 2020 is ₹ 1,80,000

2. 20% of the purchases of materials and sales are for Cash

3. 60% of the debtors are paid in the month following in the month of sales and remaining in the second month

4. Payment period allowed by creditors is 2 months

5. Sales commission @ 6% on sales are payable in the month following after 2 months of sales

6. Delay in payment of wages ½ month, production OH 25% and Selling & D. OH 1 month

7. Deposit to be received from the public ₹ 30,000 in October

8. Rent ₹ 2000 per month is payable in advance quarterly in September and December

53. From the budgeted data forecast the cash position at the end of April, May and June.

Month	Sales	Purchases	Wages	Factory Expenses	Selling & Distribution
February	80,000	41,000	5,600	3,900	10,000
March	76,500	40,500	5,400	4,200	14,000
April	78,500	38,500	5,400	5,100	15,000
May	90,000	37,000	4,800	5,100	17,000
June	95,000	35,000	4,700	6,000	13,000

1. A sales commission of 5% on sales due 2 months after sales is payable in addition to selling expenses

2. Plant valued @ ₹ 65,000 will be purchased and paid in June and the dividend for the last financial year of ₹ 15,000 will be paid in May

3. There is 2 months credit allowed to customers and receipt from payment of suppliers

4. Cash balance on 1st April ₹ 1,00,000.

54. From the following forecast the income and expenditure and prepare a cash budget for the month of January to April 2020.

Month	Sales	Purchases	Wages	Manf. Exp.	Admin. Exp.	Selling & Dist. Exp.
November 2019	3,00,000	1,50,000	30,000	11,500	10,600	5,000
December 2019	3,50,000	2,00,000	32,000	12,240	10,400	5,500
January 2020	2,50,000	1,50,000	25,000	9,900	11,000	6,000
February 2020	3,00,000	2,00,000	30,000	10,500	11,500	6,200
March 2020	3,50,000	2,25,000	24,000	11,000	12,200	5,700
April 2020	4,00,000	2,50,000	26,000	12,000	11,800	7,100

1. 40% of sales are made on cash basis and the customer are allowed at a credit of 2 months

2. A dividend of ₹ 1,00,000 is payable in April

3. Capital expenditure to be increased, plant purchased for cash on 15th January for ₹ 50,000, a building has been purchased on 1st March for ₹ 1,00,000 and the payments are to be paid in monthly instalment of ₹ 20,000 each.

4. The creditors are allowed a credit of 2 months

5. Wages are paid in the 1st day of next month

6. Lag-in payment of other expenses is one month

7. Balance of cash in hand as on 1 January 2020 is ₹ 1,00,000

55. S trades gives the following information and requires you to prepare a cash budget for 3 months from October to December 2020.

Month	Sales	Purchases	Wages	Manfg. Exp.	Other Expenses
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August	3,00,000	2,50,000	42,000	8,000	3,000
September	3,20,000	3,00,000	40,000	12,000	2,000
October	4,40,000	3,80,000	38,000	14,000	5,000
November	4,60,000	3,00,000	35,000	18,000	5,500
December	4,00,000	2,70,000	36,000	16,000	4,500

1. Cash in hand on 1-10-2020 is ₹ 1,50,000

2. 40% of sales are in cash and the balance are realized equally in 2 subsequent month

3. Creditors are paid in the month following in month of supply

4. 25% of wages are paid in the next month

5. Lag in payment of manufacturing expenses 1 month

6. Rent ₹ 1000 per month it payable in advances quarterly in September and December

7. Plant purchased in the month of October for cash ₹ 50,000 and Building purchased on 15th December @ ₹ 1,00,000 and payments made in instalment of ₹ 20,000 each month.

8. Share premium of ₹ 30,000 received in the month of November.

56. Rakshitha Traders provides following information and requests you to prepare a cash budget from April to June 2020.

Month	Sales	Purchases	Wages	Mang. Exp	Other Exp.
February	10,00,000	8,00,000	40,000	30,000	15,000
March	14,00,000	6,00,000	44,000	32,000	20,000
April	8,00,000	6,50,000	45,000	34,000	24,000
May	10,00,000	6,80,000	50,000	36,000	24,000
June	9,50,000	7,00,000	52,000	38,000	30,000

1. Cash in hand on 1st April 2020 is ₹ 1,00,000

2. 50% of the sales is for cash

3. 50% of debtors allowed 1 months credit and remaining 50% debtors allowed 2 months credit

4. Sales Commission @ 5% on sales to be paid to the salesman in the month of sales

5. Creditors are paid in the month following the month of supply

6. Lag in payment of manufacturing expenses half month and other expenses ¼th month

7. Wages are paid on the 1st working day of the next month.

57. From the following budgeted data forecast the cash position for 6 months ended 31-12-2020.

Month	Sales	Purchases	Wages	Prodn. OH	Selling & D OH
June	4,00,000	3,00,000	60,000	25,000	8,000
July	4,20,000	3,10,000	70,000	28,000	7,800
August	5,40,000	3,80,000	74,000	32,000	10,000
September	5,60,000	4,00,000	76,000	36,000	11,000
October	5,80,000	4,00,000	78,000	40,000	12,000
November	5,40,000	4,20,000	80,000	42,000	12,400
December	5,20,000	4,10,000	76,000	42,800	12,800

1. Cash balance on 1st July 2020 is ₹ 1,80,000

2. 20% of the purchases of materials and sales are for Cash

3. 60% of the debtors are paid in the month following in the month of sales and remaining in the second month

4. Payment period allowed by creditors is 2 months

5. Sales commission @ 6% on sales are payable in the month following after 2 months of sales

6. Delay in payment of wages ½ month, production OH 25% and Selling & D. OH 1 month

7. Deposit to be received from the public ₹ 30,000 in October

8. Rent ₹ 2000 per month is payable in advance quarterly in September and December.

58. ITC Company Ltd. Wishes to arrange over draft facilities with its bankers during the period April to June when it will be manufacturing mostly for stock. Prepare cash budget for the above period from the following data including the extent of bank facilities of the company will required at the end of each month.

Months	Sales	Purchases	Wages
February	1,80,000	1,24,800	12,000
March	1,92,000	1,44,000	14,000
April	1,08,000	2,43,000	11,000
May	1,74,000	2,46,000	10,000
June	1,26,000	2,68,000	15,000

1.50% of credit sales is realised in the month of following the sales and the remaining 50% in the 2nd month following

2. Creditors are paid in the month following the month of purchase

3. Wage are paid in the current month

4. Cash @ bank on 1st April (estimated) 25,000.

#### B Part

59. Prepare an estimate of the working capital requirement of a manufacturing concern from the details furnished below relating to the year 2020-21.

Sales for 3 months credit ₹ 48,00,000

Raw Materials purchased ₹ 18,00,000

Wages paid in 15 days in arrears ₹10,80,000

Manufacturing Overheads 1 month in arrears ₹ 4,80,000

Administrative Overheads 1 month in arrears ₹ 1,20,000

Sales promotion expenses payable 3 months in advance ₹ 1,20,000

Income tax payable at the end of each quarter ₹ 1,00,000

The company enjoys one month's credit from the supplier of raw material. It maintains 2 months stock of raw materials and 2 months stock of finished goods. Cash balance is maintained at ₹ 50,000 assume 10% for contingency.

60. S Enterprises furnishes the following particulars from which you are required to estimate working capital requirement using Operating Cycle.

1. Average Inventory

Raw Material ₹ 4,00,000

Work In Progress ₹ 6,00,000

Finished Goods ₹ 8,00,000

2. Particulars of Daily Operation

Raw Material Consumed ₹ 40,000

Cost of Production ₹ 1,00,000

Cost of Goods Sold ₹ 1,60,000

Credit Sale ₹ 1,50,000

Credit Purchases ₹ 80,000

3. Total Debtors ₹ 18,00,000

4. Total Creditors ₹ 10,40,000

61. XYZ Company desired to purchase the business of another company. You are required to advise the company of the avail of working capital required for the 1st year by preparing the statement showing working capital requirements with the help of the following details.

The Stock of Raw Materials ₹ 5000

The Stock of Finished Goods ₹ 8000

Sales ₹ 3,12,000

Wages ₹ 2,60,000

Miscellaneous Expenses ₹ 48,000

Sundry Expenses on promotion ₹ 8000

The company gives average credit to customers for 2 months, The company enjoys the credit facility from the supplier for 1 month where the Raw Material value was ₹ 150,000. The wages are in arrears for 1.5 weeks and miscellaneous expenses are in arrears for 15 days. The company made payment of promotional expenses half-yearly in advance, also the company wishes to keep 10% as a contingency reserve

62. The management of German Collaboration Limited has called for a statement showing the working capital needed to finance a level of activity of 3,00,000 units output for the year. The cost structure for the company's product for the said activity is detailed below:

	Cost per unit (Rs.)
Raw-materials	20
Direct labour	5
Overhead	15
Total cost	40
Profit	10
Selling price	50

1. Past trends indicate that raw-material are held in stock on an average for two months.
2. Work-in-progress will approximate half a month of production.
3. Finished goods remain in a warehouse on average for a month.
4. Suppliers of materials extend a month's credit.
5. Two month's credit is normally allowed to debtors.
6. A minimum cash balance of Rs. 25,000 is expected to be maintained.
7. The production pattern is assumed to be even during the year. Prepare the statement of working capital determination.

63. A proforma cash sheet of a company provides the following particulars.

Raw Material ₹ 100

Direct Labour cost ₹ 37.50

Overhead Cost ₹ 75

Total Cost ₹ 212.50

Profit ₹ 37.50

Selling Price ₹ 250

1. The company keeps Raw Material in Stock on an average for 1 month
2. Work in Progress on an average 1 week
3. Finished Goods in stock on an average for 2 weeks
4. Credit allowed by the supplier is 3 weeks
5. The company allows 4 weeks credit for its customers
6. Lag in payment of wages is 1 week
7. Lag in payment of overhead expenses is 2 weeks
8. The company sells 20% of the output against cash and maintain cash in hand and @ bank put together ₹ 37,500

Required to prepare a statement showing the estimate of working capital to finance activity of 1,30,000 units of production. Assume that production is carried on evenly throughout the year and wages and overhead accrues similarly. Work in Progress is 80% completed in all respect.

64. From the following information, you are required to estimate the Net Working Capital.

Raw Material ₹400

Direct Labour ₹150

Overheads ₹300

Total Cost ₹850

Additional Information:

Selling price ₹1,000 per unit  
 Output 52,000 unit  
 Raw Material in Stock 4 weeks  
 Work-in-Progress 2 weeks  
 Finishes Goods in Stock 4 weeks  
 Credit Allowed by supplier 4 weeks  
 Credit allowed by debtors 8 weeks  
 Cash at Bank is expected to be ₹ 50,000

65. The proforma cost sheet of a company shows the following particulars:

Element of Cost Amount per Unit (₹)

Raw Material	70
Direct Labour	30
Overheads	50
Profit	50
Selling Price	200

The following particulars are available:

1. Raw Materials are in stock on an average of 2 months
2. Materials are in process on an average for one month
3. Finished Goods are in stock - an average for 2 months
4. Credit allowed by creditors is 2 months
5. Credit allowed to customers is 2 months
6. Lag-in payment of wages is one month
7. Lag in payment of overhead expenses is one month
8.  $\frac{1}{4}$  th of the output is sold for cash
9. Cash in hand and at the bank is expected to be ₹ 30,000

You are required to prepare a statement showing the working capital needed to finance a level of activity of 52,000 units of production.

66. ABC Ltd. Sells its products on a gross profit of 20% on sales. The following information is extracted from its annual account for the year ended 31-03-21.

1. Sales (3 months) ₹ 40,00,000
2. Raw Material ₹ 12,00,000
3. Wages (15 days in arrears) ₹ 9,60,000
4. Manufacturing expenses (1 month in arrears) ₹ 12,00,000
5. Administration Expenses (1 month in arrears) ₹ 4,80,000
6. Sales promotion expenses payable (half-yearly in advance) ₹ 2,00,000

The company enjoys 1-month credit from suppliers of Raw Materials and maintains 2 months stock of Raw Material and 1.5 months of finished goods.

Cash balance is maintained @ ₹ 1,00,000 as a precautionary balances.

Assuming a 10% margin find out the working capital requirements of ABC Ltd. Assume 12 months in a year. Assume or consider the total cost while calculation of debtors and finished goods with the help of gross profit margin.

67. A Proforma of cash sheet of a company provided the following information

Estimated sales for the year 52,000 units.

Elements of Cost Amount per unit in ₹

Raw Material	8
Direct Labour	2
Overhead	6
Total Cost	16



Profit	4
Selling Price	20

1. Raw Materials are in stock on an average of 1 month
2. Materials are in Process on an average half month
3. Finished Goods are in stock on an average of 6 weeks
4. Credit allowed by Creditors is one month
5. Credit allowed to Debtors is 2 months
6. Lag in Payment of Wages is 1 ½ week
7. Cash in hand and @ bank is expected to be ₹ 7300

You are informed that production is carried on evenly during the year an average of wages and Overheads accrued similarly. Calculations are to be made on the basis of weeks.

68. From the following details estimate the Net Working Capital required for the project of Company A Ltd., 10% to your computed figure to allow contingencies.

**Estimate Cost per unit of Production:**

1. Raw Material ₹ 80
2. Direct Labour ₹ 30
3. Overhead ₹ 60
4. Total Cost ₹ 170

**Additional Information:**

1. Selling Price ₹200 per Unit
2. Level up activities 1,04,000 units of production per annum
3. Raw Material in Stock on an average 4 weeks
4. Work-in-Progress on an average of 2 weeks
5. Finished Goods in Stock on an average of 4 weeks
6. Credit allowed by suppliers on an average of 4 weeks
7. Credit allowed by debtors on an average of 8 weeks
8. Lag – in – Payment of wages on an average of 1 ½ weeks
9. Cash at Bank is expected ₹ 25,000.

69. HSIL Ltd. It presently operating at 60% level producing 36,000 packets of snacks and proposes to increase its capacity utilization in the coming year by 33.33% over the existing level of production.

**1. Unit cost structure of the product at the current level**

Particulars	₹
Raw Material	4
Wages (Variable)	2
Overheads (variable)	2
Fixed Overhead	1
Profit	3
Selling Price	12

2. Raw Materials will remain in stores for one month before being issues to production. The material will remain in process for a further one month, suppliers grant 3 months credit to the company.
3. Finished goods remain in godown for one month
4. Debtors are allowed credit for 2 months
5. Average time lag in wages and overheads payment is one month and these expenses accrue evenly throughout the production cycle
6. No increase in the cost of inputs or selling price envisage

Prepare a projected profitability statement and a statement showing working capital requirement at the new level, assuming that a minimum cash balance of ₹ 19,500 has to be maintained.

70. Estimated the Working Capital requirement from the following information. You are instructed to add 20% for contingencies.

1. Amount Blocked up in Stock:	₹
The stock of Finished Goods	6,000
The Stock of Materials	10,000
2. Average Credit Sales	
Inland Sales – 8 Weeks Credit	3,00,000
Export Sales – 2 Weeks Credit	80,000
3. Lag in Payment and Outgoings	
Wages (2 Weeks)	2,50,000
Purchase of Materials (2 months)	50,000
Rent & Royalties (6 months)	10,000
Clerical Staff (1 month)	5,000
Miscellaneous Expenses (2 months)	50,000
4. Payment in advances	
Sundry Expenses (paid quarterly)	10,000

71. From the details prepare an estimate of the requirements of working capital.

Production 60,000 units  
Selling price per unit ₹ 50  
Raw Materials 60% of selling Price  
Direct Wages 10% of Selling Price  
Over Heads 20% of Selling Price

**Additional Information:**

1. Raw Materials are in hand 2 months requirements
2. Production time 1 month
3. Finished goods in stores 3 months
4. Credit allowed to customers 3 months
5. Credit for materials purchased is 2 months
6. Cash balance ₹ 40,000
7. Wages and Overheads are paid at the beginning of the month following in production. All the required materials are charged with initial stage and overhead accrued similarly

72. A proforma cost sheet of a company provides the following particulars

Elements of Cost	Per unit in ₹
Materials	80
Direct Labour	30
Overheads	60
Total Cost	170
Profit	30
Selling Price	200

**The following further particulars are available:**

1. Raw materials are in stock on an average for 1 month
  2. Raw materials are in process on an average for half a month
  3. Finished goods are in stock on an average of one month
  4. Credit allowed by suppliers is for one month
  5. Lag in payment of wages is 1½ week
  6. Lag in payment of overheads is one month
  7. ¼ of the output is sold against cash
  8. Cash in hand and cash at the bank is expected to be ₹ 25,000
  9. Credit allowed to customers is for 2 months
- You are required to prepare a statement showing the working capital need to finance a level of activity of 1,04,000 units of production. You can also assume a time period of 4 weeks as equivalent to a month.

73. From the following data pertaining to a company, compute operating cycles for each of the two years.

Particulars	I year (₹)	II Year (₹)
Stocks:		
Raw Material	20,000	27,000
Work in Progress	14,000	18,000
Finished Goods	21,000	24,000
Purchase of Raw Material	96,000	1,35,000
Cost of Goods Sold	1,40,000	1,80,000
Sales	1,60,000	2,00,000
Debtors	32,000	50,000
Creditors	16,000	18,000

Also, calculate a number of operating cycles in a year and use it to estimate the size of working capital. You can assume 360 days in a year for the purpose of calculation

74. Calculate the amount of working capital requirement of A Ltd. From the following information on a weekly basis.

Raw Material ₹ 200 per unit

Direct Labour ₹ 80 per unit

Overheads ₹ 180 per unit

Profit ₹ 40 per unit

Raw Materials are held and sold an average of 1 month

Each unit of production are expected to be in process for 1 ½ month

Finished goods are in stock on an average for 8 weeks

Credit allowed by suppliers 5 weeks and to debtors is 2 months

Time lag in payment of wages is 1 ½ week and overheads is 2 months

¼th sales are made on a cash basis and cash in hand is expected to be 80,000

The expected level of production units is 156,000 for a year of 52 weeks.

75. You are supplied with the following information with respect to Britannia India Ltd. For the year 2021.

Production for the year 69,000 units

Finished goods in-store 3 months

Raw material in stores 2 months consumption

Production process one month

Credit allowed by creditors 2 month

Credit is given to debtors 3 months

Selling price per unit ₹ 50

Raw Materials 50% of the selling price

Direct wages 10% selling prices

Overheads 20% of selling prices

There is a regular production and sales cycle. Wages and overheads accrue evenly. Wages are paid in the next month of accrual. Materials are introduced at the beginning of the production cycle.

You are required to calculate the working capital requirement.

76. From the following information estimate the working capital requirement for 2021 of Raksha Co. Ltd.

Estimated Cost	Cost Per Unit (in ₹)
Raw Material	50
Wages	30

Factory Overhead	30
Administration Overhead	25
Selling Overhead	25
Total Cost	160

1. Production estimated to be 72,000 units
2. Selling prices 200 per unit
3. Materials are in stores for 1 month
4. Finished goods are in stores for 2 months
5. Production process consumes 1 month
6. Suppliers are allowed a credit of 1 month
7. Customers are allowed a credit of 2 months
8. Lag-in- Payment of wages 1 month
9. 10% Contingency

77. A steel manufacturing concern presents the following particulars for the year 2020-21. you are required to estimate the working capital requirement of the concern 2021-22.

Particulars	Amount (in ₹)
Direct Sale to Automobile Manufacturers	30 Lakh
Sale to Dealer	12 Lakh
Direct Local Supply to Consumers	6 lakh
Raw Material	
Iron Ore (3 months Credit)	6 Lakh
Scrap Iron (2 months Credit)	7,20,000
Wages Paid (1 month credit)	9 lakh
Other Manufacturing overheads (3 months lag)	4,40,000
Office and Administration Overhead (1 month lag)	1,20,000
Selling and Distribution expenses (3 month lag)	2,80,000
Advertisement Expenses (Payable 3 months in advance)	3,00,000

The Stock of Iron ore 3 months requirement  
 The Stock of Scrap Iron 2 months requirement  
 Stock of Finished Goods 3 month requirement  
 Estimated cash at bank ₹3 lakh

For all the categories the company sells at a uniform 30% profit.

However, the credit period allowed was 1 month for the automobile manufacturer, 2 months for the dealers, and ½ a month credit for the direct local supply to consumers.

78. XYZ Ltd., a manufacturing company provides the following information.

1. The annual output during the year is 120,000 units
2. Cost structure
  1. Raw Material ₹ 50 (including a discount of ₹10)
  2. Direct Labour ₹ 10
  3. Overhead ₹ 20 [Of the overheads, ₹10 constitute depreciation expenses]
3. Profit 20% of the cost
4. Credit allowed to debtors 2 ½ months
5. Credit allowed by creditors 1 ½ months
6. Raw Materials are in stock on an average of 1 month

- 7. Procuring period in the warehouse on an average 3 months
  - 8. Finished goods in the warehouse on an average 3 months
  - 9. 10% of the total working capital is to keep in hand for contingencies
- Find out working capital requirement under Cash Cost Approach

79. From the following particulars, prepare a statement showing the working capital requirement.

Sales for the year 24,000 units

**Cost structure**

Raw Material ₹ 10 per unit

Labour ₹ 6 per unit

Overheads ₹ 4 per unit

Total cost ₹ 20 per unit

Profit @ 20% on cost ₹ 4 per unit

Selling price ₹ 24 per unit

**Additional information:**

- 1. Raw materials are to be maintained in stock on an average for 1 month
- 2. Materials are in process on an average for 2 months
- 3. Finished goods are in stock on an average for 3 months
- 4. Credit allowed to customers for 4 months
- 5. Credit allowed by suppliers for 2 months
- 6. It may be assumed that production and overhead accrued throughout the year.

80. A proforma cost sheet of a company provides the following

Element of Cost Value as a % of the selling price

Material 50%

Direct Labour 10%

Overheads 10%

The following further particulars are available

- 1. It is proposed to maintain a level of activity at 1,00,000 units
- 2. Selling price is ₹ 20 per unit
- 3. Raw Materials are expected to be in the stores for an average of 2 months
- 4. Materials will in process on an average of one month
- 5. Finished goods are expected to be in the stores for an average of 2 months
- 6. Credit allowed to debtors is three months
- 7. Credit allowed by suppliers is two months. Calculate working capital requirement

81. Prepare an estimate of working capital requirement from the following data of a manufacturing concern.

Sales (Credit Period 3 Months) ₹40,00,000

Raw Materials ₹12,00,000

Wages Paid – 15 days in arrears ₹9,60,000

Manufacturing Expenses 1 month in arrears ₹ 6,00,000

Administrative Expenses 1 month in arrears ₹ 1,20,000

Sales promotion expenses payable in advance for 3 months ₹ 1,00,00

Income tax payable ₹ 25,000

The company enjoys one month's credit from suppliers of Raw Materials. It maintains two months stock of raw materials and two months stock of finished goods. The cash balance is maintained at ₹ 50,000 as a precautionary balance. Assume 10% for contingency.

82. From the following Particulars prepare a statement showing working capital requirement.

Sales for the year 40,000 units  
 Raw Material ₹ 20 per unit  
 Labour ₹ 12 per unit  
 Overhead ₹ 8 per unit  
 Total cost ₹ 40 per unit  
 Profit @ 20 % of cost

**Additional information:**

- 1.Raw Materials are to remain in stock on an average for 1 month
- 2.Lag in payment of wages 1 ½ month
- 3.Lag in payment of overhead 1 month
- 4.Materials are in process on an average for 2 months
- 5.Finished goods are in stock on an average for 3 months
- 6.Credit allowed to customer 4 months
- 7.Credit allowed to suppliers 2 months

It may be assumed that production and overhead accrued evenly throughout the year.

83. SD Technology Ltd. Furnishes the following particulars from which you are required to calculate Gross Operating Cycle and Net Operating Cycle.

(i)Average Inventory

Raw Material	₹9,00,000
Work in Progress	₹6,50,000
Finished Goods	₹12,00,000

(ii) Operation Details per day

Raw Material Consumed	₹ 60,000
Cost of Production	₹1,30,000
Cost of Goods Sold	₹1,50,000
Credit sales	₹1,00,000
Credit purchase	₹80,000

(iii) Total Debtors ₹25,00,000

(iv) Total Creditors ₹16,00,000

84. Structural Manufacturers Ltd. Provides the following particulars for the year 2021.

- a)Average Debtors ₹ 7,00,000
- b)Average period of credit allowed 20 days
- c)Raw Material Consumer ₹ 48,00,000
- d)Cost of production ₹ 1,08,00,000
- e)Cost of Goods Sold ₹ 2,25,00,000
- f)Credit sales ₹ 2,10,00,000

Average inventory:

Raw Material ₹ 4,00,000

WIP ₹ 3,00,000

Finished Goods ₹ 5,00,000

Calculate working capital requirement based on Operating Cycle assuming 360 days for a year.

85. Following Particulars are available from cost record of a company

Element of Cost Cost per Unit ₹

Raw Material	48
Labour	18
Overhead	36
Profit	18

**Further Information:**

- 1.Raw Materials are in stock on an average 1 month
- 2.Materials are in process on an average of 2 weeks
- 3.Finished goods are in stock on an average 1 month
- 4.Credit allowed by the creditor is 1 month
- 5.Credit allowed to the debtor is 2 months
- 6.Lag in payment of wages is 1 ½ month
- 7.Lag in payment of overhead expenses is 1 month
- 8.25 % of output is sold against cash
- 9.Cash @ bank is expected to be ₹ 10,000

You are required to prepare a statement showing the working capital needed to finance a level of activity of 1,56,000 units of production. Assume 4 weeks in a month, wages and overheads accrued evenly throughout the year

86. Firm A and B are identical in all respect including risk factors except for the debt-equity mix. Firm A has issued 12% debentures of ₹ 15,00,000 while B has issued only equity. Both the firms earn 30% before interest and tax on their total asset of ₹25,00,000 assuming a tax rate of 50% and a capitalization rate of 20% for all equity. You are required to compute the value of 2 firms using the NI and NOI approach.

87. Alembic Pharmaceutical Ltd is a Pune-based Pharma company. It furnishes the operating details and the balance sheet as on 31-03-2021.

Balance Sheet as on 31-03-2021

Sources of Funds	Amount (₹)	Application of Funds	Amount (₹)
Equity Share Capital	80,000	Fixed Assets	50,000
Preference Shares	40,000	Investment	40,000
Borrowed Funds	1,00,000	Current Assets	1,20,000
Current Liabilities	40,000	Misc. Expenses:	
		Profit & Loss A/C	20,000
		Preliminary Expenses	30,000
	2,60,000		2,60,000

**Operating Details:**

Sales 1000 units @ ₹ 170 per unit, Material Cost ₹ 35 per unit, Labour Cost @ ₹ 15 per unit, and Fixed cost ₹ 50,000.

Calculate the return on investment (ROI) of the Company.

88. The firm D and S are identical in all respect including risk factor except for debt equity mix. Firm A has issued 10% debentures of ₹ 22,00,000 while B has issued only equity. Both the firms earn 40% before interest and tax on their total asset of ₹35,00,000 assuming a tax rate of 30% and capitalization rate of 25% for all equity firm. You are required to compute the value of 2 firms using NI and NOI approach.

89. The data pertaining to a firm given below

Particulars	₹ in Lakhs
Sales	70
Variable Cost	30
Fixed Cost	10
10% Debentures	50
Equity Shares of ₹ 10 each	10
Assume the Tax Rate to be 50%	

- 1.Calculate EPS of the firm
- 2.Calculate the Return on Investment

90. From the following information pertaining to companies A and B calculate operating profit.

Particulars	Company A	Company B
Sales	₹18,00,000	₹18,00,000
Variable Cost	50% of sales	40% of sales
Fixed Cost	₹2,00,000	₹3,00,000

91. The firm P and Q are identical in all respect including risk factors except for the debt-equity mix. Firm P has issued 10% debentures of ₹12,00,000 while Q has issued only equity. Both the firm earns 30% before interest and tax on their total asset of ₹ 12,50,000. Assuming a tax rate of 50% and a capitalization rate of 20% for all equity companies. you are required to compute the value of 2 firms using the Net Income Approach and the Net Operating Income Approach.

92. A Ltd. Company presents the following facts:

Sales – 20,000 units at ₹ 10 per unit

Material cost - ₹ 4 per unit

Wages ₹ 2 per unit

Fixed cost ₹ 10,000

Capital employed ₹ 1,00,000

Calculate return on investment. Also calculate the range of ROI for the following situations:

1. Material cost goes up by 25%

2. Labor cost increase by 20%

3. Sales declines by 20%

4. Fixed cost increases by 25%

93. Sun Pharma Ltd. is planning to set up a Covid-19 vaccine production unit in Karnataka. The projected figures are as furnished below;

Financial Details	Amount (₹)
Equity Shares of ₹ 10 each	1,00,000
13% Preference Share of ₹ 100 each	2,00,000
12% Unsecured debentures of ₹ 100 each	2,00,000
Reserves and Surplus	3,00,000

**Operational Details:**

Sales 1000 Component units

Price ₹ 800 per unit

Material cost ₹ 250 per unit

Direct wages ₹ 106 per unit

Fixed Cost ₹ 3,00,000

Calculate the return on capital employed.

94. Tat Motors the manufacturer of auto motors, had the following cost sheet and balance sheet as on 31-03-2021. calculate ROI

Balance Sheet as on 31-03-2021

Sources of Funds	Amount (₹)	Application of Funds	Amount (₹)
Share holders Fund	10,00,000	Fixed Assets	8,00,000
Loan Funds	5,00,000	Investment	Nil
		Current Assets	9,00,000
		– Current Liability	2,00,000
	15,00,000		7,00,000
			15,00,000

Balance Sheet as on 31-03-2021

Sources of Funds	Amount (₹)	Application of Funds	Amount (₹)
Share holders Fund	10,00,000	Fixed Assets	8,00,000



Loan Funds	5,00,000	Investment	Nil
		Current Assets	9,00,000
		– Current Liability	2,00,000
	15,00,000		7,00,000
			15,00,000

95. Tat Motors the manufacturer of auto motors, had the following cost sheet and balance sheet as on 31-03-2021. calculate ROI

Cost Sheet for the year ending 31-03-2021 [out put 12,000 Units]

Elements of Cost	Amount (₹)
Material Cost @ 40/Unit	4,80,000
Labour Cost @ 20/Unit	2,40,000
Variable Overhead @ ₹ 10/Unit	1,20,000
Total Variable Cost	8,40,000
+Fixed Manufacturing Overheads	2,20,800
+Fixed Office & administration OH	89,200
+Fixed Selling & Distribution OH	50,000
Total Cost	12,00,000
Profit	6,00,000
Sales	18,00,000

Balance Sheet as on 31-03-2021

Sources of Funds	Amount (₹)	Application of Funds	Amount (₹)
Shareholders Fund	10,00,000	Fixed Assets	8,00,000
Loan Funds	5,00,000	Investment	Nil
		Current Assets	9,00,000
		Current Liability	(2,00,000)
	15,00,000		7,00,000
			15,00,000

96. A company and B company are identical in every aspect except that company A uses debt while company B doesn't. company A has ₹9,00,000 debentures carrying 10% interest. Both the company earns 20% operating income on their total asset of ₹15,00,000. the capitalization rate is 15% you are required to compute the value of the firms using NIA and NOIA.

97. Following information is related to 2 components X and Y

Normal usage 10,000 units per week  
 Minimum usage 1500 units per week  
 Maximum usage 5000 units per week  
 Re-order quantity X 40,000 units and Y 60,000 units  
 Re-order period X 4 to 6 weeks and Y 2 to 4 weeks  
 Calculate Stock levels for each component

98. Calculate EOQ from the following particulars  
 Annual requirements is 6000 units

Cost of material per unit ₹5

Carrying cost per item for one year ₹1

Cost of placing and receiving one order ₹ 60

Alternative order size in units – 6,000, 3,000, 2,000, 1,000, 600, and 200

99. Form the following details draw a plan of ABC analysis of inventory control

Item Number No of Units Cost per Units (₹)

1	7,000	5.00
2	24,000	3.00
3	1,500	10.00
4	600	22.00
5	38,000	1.50
6	40,000	0.50
7	60,000	0.20
8	3,000	3.50
9	300	8
10	29,000	.40
11	11,500	7.10
12	4,100	6.20

100. Vision tubes are the manufactures of picture tubes for TV. The following are the details of their operations during 2020-21

Ordering cost ₹ 100 per order

Inventory carrying cost 20% per Annam

Cost of Tubes ₹ 500 per tubes

Normal Usage 100 tubes per week

Calculate EOQ and Comparative cost of EOQ if the supplier is willing to supply 1500 units at a discount of 5%

101. A firm has several items of inventory. The average number of each of these items as well as these units cost is listed below

Item Number No of Units Cost per Units (₹)

1	160	76.00
2	3000	3.00
3	1200	1.90
4	6000	0.50
5	1800	25.00
6	130	2.70
7	7400	9.50
8	3200	2.60
9	1920	2.00
10	800	1.80

102. SD groups manufactures of refrigerators by 9600 units of certain components. Annual usage is 9600 units. Cost of placing an order is ₹ 300 and cost of carrying one unit for a year is ₹ 48, unit cost ₹1500.

1. Calculate EOQ

2. No of orders per year

3. Presently purchase once in a year if he purchases as per EOQ how much he would save?

103. Two components A and B are used as follows  
 Normal usage 50 units per week  
 Minimum usage 25 units per week  
 Maximum Usage 75 units per week  
 Re order quantity A – 300 units, B – 500 units  
 Re order period A – 4 to 6 weeks , B – 2 to 4 weeks  
 Calculate reorder level, minimum level, maximum level, average level
104. Calculate various stock levels from the following data  
 Normal consumptions 300 units per day  
 Maximum consumptions 420 units per day  
 Minimum consumptions 240 units per day  
 Re-order quantity 3600 units  
 Re-order period 10 to 15 days  
 Normal re-order period 12 days
105. Priya Groups manufacturers of television buys ₹ 14,400 of certain components. Annual usage is 14,400 units. Cost of placing an order is ₹ 400 and cost of carrying one unit for a year is ₹ 48. Unit cost is ₹ 1500.  
 Calculate 1) EOQ 2) Number of orders per year 3) Presently he is purchasing once in a year. How much would he save if the purchases as per EOQ?
106. Following information is related to 2 components A and B  
 Normal usage 100 units per week  
 Minimum usage 50 units per week  
 Maximum usage 150 units per week  
 Re-order quantity A 400 units and B 600 units  
 Re-order period X 4 to 6 weeks and Y 2 to 4 weeks  
 Calculate stock level for each component
107. The annual demand for a product is 8400 units the net unit cost is ₹ 6 and inventory carrying cost per unit is 25% of the average inventory cost. If the cost of procurement is ₹75,  
 Determine 1) EOQ 2) Number of Order per annum 3) Time between 2 orders
108. From the following details draw a plan of ABC selective control
- | Item Number | No of Units | Cost per Units (₹) |
|-------------|-------------|--------------------|
| 1           | 4,100       | 6.20               |
| 2           | 11,500      | 7.10               |
| 3           | 7,000       | 5.00               |
| 4           | 24,000      | 3.00               |
| 5           | 600         | 22.00              |
| 6           | 1,500       | 10.00              |
| 7           | 37,000      | 1.60               |
| 8           | 41,000      | 0.60               |
| 9           | 60,000      | 0.20               |
| 10          | 3,000       | 3.50               |
| 11          | 300         | 8.00               |
| 12          | 29,000      | 0.40               |

109. Preetham Limited produces a product which has a monthly demand of 4000 units. The product requires a component X which is purchased at ₹ 20 for every finished product. One unit of the component is required the ordering cost of ₹ 120 per order and the holding cost is 10% per annum. You are required to calculate:
1. EOQ
  2. If the minimum size to be supplied 4000 units what is the extra cost the component has to incur.
110. From the following data calculate re-order level, minimum level, maximum level and average stock level.
- Normal usage 500 units per week  
 Maximum usage 900 units per week  
 Minimum usage 300 units per week  
 Re order quantity 4800 units  
 Re order period 4 to 6 weeks
111. What is accounts receivable management? explain the benefits of accounts receivable management.
112. What do you mean by credit policy? Analyse the dimensions of Receivable Management.
113. What do you mean by Venture Capital financing? Explain the stages of Venture Capital Financing.
114. What is Business Plan? What are the essential elements of Business Plan.
115. What do you mean by Accounts receivable management? Explain the factors affecting size of receivable.
116. What is Inventory Management? Explain the objectives of Inventory Management.
117. What is Venture Capital? Explain stages of venture financing.

#### C Part

118. Write a note on Components of Working Capital.
119. What are the different Kinds of Working Capital?
120. Explain the nature of Working Capital
121. SD Company Ltd. Is expecting an annual earning before the payment of interest and tax is ₹ 2,00,000. The company in its capital structure has ₹ 8,00,000, 10% debentures. The cost of equity or equity capitalization rate is 12.5%. You are required to calculate the value of the firm according to Net Income Approach and also compute the overall cost of capital
122. Firm S and D are identical in all respect including risk factors except for the debt-equity mix. S has issued 6% debentures of ₹10,00,000, D has issued only equity. Both the firms earn 30% before and interest and tax on their total asset of ₹25,00,000. Assume a tax rate of 50% and capitalization of 20% for all equity companies. You are requested to compute the value of 2 firms using N.I.A.
123. A company has an annual Net Operating Income of ₹90,000 the company has ₹3,00,000, 10% debentures the overall cost of capital of the company is 12% what would be the value of the company? Also, calculate equity capitalization rate as per Net Operating Income Approach.
124. A company has an Annual Net Operating Income of ₹3,60,000. The company has ₹14,00,000, 12% debentures. The overall cost of capital of the company is 14%. What would be the value of the firm or

company? Also, calculate the equity capitalization rate.

125. A company expects Net Income of ₹80,000 it has ₹ 2,00,000, 8% debentures. The equity capitalization rate of the company is 10% calculate the value of the firm and overall capitalization rate (ignoring tax) if the debentures debt is increased to ₹ 3,00,000 what shall be the value of the firm and overall capitalization rate.
126. A company expected annual Net Operating Income [EBIT] is ₹ 50,000. The Company has ₹ 2,00,000 10% debentures, the equity capitalization rate of the company is 12.5%. Assuming no taxes find out the value of the firm under Net Income Approach and also calculate the overall cost of capital.
127. A company expects a Net Income Approach of ₹ 1,00,000 it has ₹5,00,000 6% Debenture. The overall capitalization rate is 10% calculate the value of the firm and the equity capitalization rate (cost of equity) according to the NOI approach. If the debt is increased to ₹ 7,50,000 what will be the effect on the value of the firm and the equity capitalization rate.
128. A company expects to earn a Net Operating Income of ₹ 3,60,000 annually. It has ₹ 12,00,000, 10% debentures, Equity Capitalization rate of the company is 12%. What would be the value of the Company and also calculate the overall cost of capital using the Net Income Approach?
129. A company Expects to earn a Net Operating Income of ₹7,00,000 annually. It has ₹23,00,000 10% Debenture. The equity Capitalization rate of the company is 14%. What would be the value of the company also calculate the overall cost of capital?
130. Arjun Ltd. furnishes the following details to know the Return on Investment. Share capital ₹ 4lakh, Reserves & Surplus ₹ 2 lakhs and long term debt ₹ 12 lakhs, Miscellaneous Expenditure ₹ 2,00,000. the EBIT is estimated to be ₹ 3,20,000 Calculate the ROI.
131. Atlas Product Ltd. Presents the following details. You are required to calculate the EBIT. The selling Price per unit is ₹12, Sales 2 lakhs units, variable cost ₹7 per unit, and fixed cost ₹7,00,000.
132. From the following particulars, calculate the rate of return
- | Particulars                   | Amount (₹ in Lakhs) |
|-------------------------------|---------------------|
| Equity Share Capital          | 5                   |
| Preference Share Capital      | 2                   |
| Reserves & Surplus            | 2                   |
| 15% Debentures                | 3                   |
| The loan from IDBI            | 1                   |
| Earning Before Interest & Tax | 1.56                |
133. Calculate the Operating profit from the following details;
- Sales 1 lakh units
  - Price ₹10 per unit
  - Variable cost ₹6 per unit
  - Fixed cost ₹ 2,00,000
134. The net sales of Apolo Co. ltd. Amounted to ₹ 15 crores. EBIT of the company as a percentage of net sales was 12%. The company has ₹ 5 crores worth of equity shares. Cumulative redeemable preference

shares amounted to ₹ 1 crore and 15% debt amounted to ₹ 3 crores. Calculate Return on Capital employed

135. From the following details pertaining to company A and Company B. Calculate their operating leverages. Identify (i) the company that enjoys a higher leverage (ii) the company that has a lower risk profile.
- | Particulars   | Company A    | Company B    |
|---------------|--------------|--------------|
| Sales         | ₹ 18,00,000  | ₹ 18,00,000  |
| Variable Cost | 50% of sales | 40% of sales |
| Fixed Cost    | ₹ 2,00,000   | ₹ 3,00,000   |
136. A small scale industrial unit was selling its output at ₹ 10 per unit with a variable cost of ₹ 4 per unit and a fixed cost of ₹ 10,000. it paid ₹ 4,000 on a bank loan as interest and paid tax at 40%. Calculate the combined leverage assuming an output of 5,000 units.
137. ABD products Ltd. Presents the following details. You are required to calculate the Operating Leverage.  
Selling Price per unit ₹ 12,  
Sales 2 lakh units and 2.5 Lakh units  
Variable Cost ₹ 7 per unit, and Fixed cost ₹ 7 lakh.  
Analyse the situation with an output and sales of 3 lakh units.
138. Calculate the operating leverage from the following details:  
Sales 1 lakh units (product A) and 2 lakh units (product B)  
Price ₹ 10 per unit (product A) and 13 per unit (product B)  
Variable cost ₹ 6 per unit (product A and B) and fixed cost ₹ 2,00,000 (product A and B)
139. From the following details pertaining to company A and Company B. Calculate their operating leverages. Identify (i) the company that enjoys a higher leverage (ii) the company that has a lower risk profile.
- | Particulars   | Company A    | Company B    |
|---------------|--------------|--------------|
| Sales         | ₹ 18,00,000  | ₹ 18,00,000  |
| Variable Cost | 50% of sales | 40% of sales |
| Fixed Cost    | ₹ 2,00,000   | ₹ 3,00,000   |
140. What do you mean by receivable management? explain nature of receivable management.
141. What is Inventory Management? Explain its importance
142. Write a note on Cash Management and Cash Planning.
143. Write a note on VED analysis.
144. Write a note on ABC analysis.
145. What is Cash budget? Explain the importance of cash budget.
146. What is Just in Time. Explain its objectives.

147. What do you mean by Receivable Management? Explain its objectives.
148. What is credit policy? Explain the objectives of credit policy.
149. What do you mean by Receivable management? explain the scope of receivable management.
150. What is Operating Leverage? explain the significance of operating leverage.
151. What is credit policy? Explain the components of credit policy.
152. What are the Important functions of receivable management.
153. Write a note on Motives for Holding Cash.
154. What are the advantages of Perpetual Inventory System.
155. What is Accounts receivable? Explain the Costs of maintaining receivables
156. Annual material requirement of a company is ₹ 75,000 units, cost per unit is ₹ 1.50. the cost to place an order amounts to ₹ 18 carrying cost is 20% of material cost. Determine the EOQ and find the number of orders to be placed in a year.
157. From the following data calculate  
Re-order level and maximum level  
Minimum usage 40 per week  
Maximum usage 90 per week  
Reorder quantity 400  
Reorder period 4 to 6 week
158. a) Calculate EOQ if annual consumption is 1600 units, cost of placing one order is ₹ 100 and the cost of carrying one unit for year is ₹8.  
b) Calculate EOQ from the following;  
Quantity 600 units  
Ordering cost ₹ 12 per order  
Carrying cost 20%  
Price per unit ₹ 40
159. Calculate EOQ in the following cases.  
a. The manufacturer of refrigerator buy 3200 units of certain components, His annual usage is 3200 units. Cost of placing an order is ₹ 100 and cost of carrying one unit for a year is ₹ 16, unit cost is ₹ 500.  
b. Annual consumption is 1600 units, cost of placing one order is ₹ 100 and the cost of carrying one unit for year is ₹8.
160. a) Calculate EOQ from the data given below  
Annual requirements 800 units  
Price per unit ₹ 4  
Carrying cost 15%  
Ordering cost ₹ 9 per order  
b) Monthly usage of materials 500 units, cost placing an order of ₹ 60, cost of materials ₹ 10 per unit. Carrying cost 10% of inventory value. Find out EOQ

D Part

E Part

F Part

G Part

H Part

I Part

J Part