

**J.K. SHAH<sup>®</sup>**  
**CLASSES**  
CAFC → INTER CA → FINAL CA

**INTER CA**  
**MAY '19**  
**REVISION NOTES**  
**FINANCIAL**  
**MANAGEMENT**

**CHAPTER 1**

**ACCOUNTING RATIO**

**Q.1.** The following is the Balance Sheet of Z Ltd. on 31st March, 2014 and other information from which you are required to calculate the following ratios :

- (a) Current Ratio.
- (b) Liquid Ratio.
- (c) Stock Working Capital Ratio.
- (d) Capital Gearing Ratio.
- (e) Stock Turnover Ratio.
- (f) Debtors Turnover Ratio and Collection Period.

Stock on 1.4.2013 was ₹ 1,20,000. Sales (all credit) were ₹ 20,00,000. Gross Profit on sales was 25%. Debtors on 1.4.2013 were ₹ 40,000.

**Balance Sheet on 31.3.2014**

Liabilities	₹	Assets	₹
12% Preference Capital	3,00,000	Fixed Assets	7,80,000
Equity Share Capital	6,40,000	Short Term Investments	2,00,000
Capital Reserve	60,000	Stock	3,80,000
General Reserve	2,00,000	Debtors	3,60,000
Profit & Loss A/c	20,000	Prepaid Expenses	60,000
14% Debentures	1,60,000		
Creditors	3,20,000		
Bank Overdraft	80,000		
	<b>17,80,000</b>		<b>17,80,000</b>

**Q.2.** The Following information relates to X. Ltd for the year end March 31st 2014.

Net Working Capital	₹ 12,00,000/-
Fixed Assets to Proprietors Funds	0.75
Working Capital Turnover	5 Times
Return on Equity (ROE)	15%

You are required to calculate:

- (a) Proprietors Funds
- (b) Fixed Assets
- (c) Net Profit Ratio

**Q. 3.** Following is the abridged Balance Sheet of Alpha Ltd. :

Liabilities	₹	Assets	₹	₹
Share Capital	1,00,000	Land and Buildings		80,000
Profit and Loss Account	17,000	Plant and Machineries	50,000	
Current Liabilities	40,000	Less: Depreciation	15,000	35,000
				1,15,000
		Stock	21,000	
		Receivable	20,000	
		Bank	1,000	42,000
<b>Total</b>	<b>1,57,000</b>	<b>Total</b>		<b>1,57,000</b>

With the help of the additional information furnished below, you are required to prepare Trading and Profit & Loss Account and a Balance Sheet as at 31st March, 2017:

- (i) The company went in for reorganisation of capital structure, with share capital remaining the same as follows:

Share Capital	50%
Other Shareholder's funds	15%
5% Debentures	10%
Payables	25%

Debentures were issued on 1st April, interest being paid annually on 31st March.

- (ii) Land and Buildings remained unchanged. Additional plant and machinery has been bought and a further ₹ 5,000 depreciation written off.  
(The total fixed assets then constituted 60% of total fixed and current assets.)
- (iii) Working capital ratio was 8: 5.
- (iv) Quick assets ratio was 1: 1.
- (v) The receivables (four-fifth of the quick assets) to sales ratio revealed a credit period of 2 months. There were no cash sales.
- (vi) Return on net worth was 10%.
- (vii) Gross profit was at the rate of 15% of selling price.
- (viii) Stock turnover was eight times for the year.
- Ignore Taxation.

**Q.4.** The following accounting information and financial ratios of PQR Ltd. relate to the year ended 31<sup>st</sup> December, 2016

<b>I</b>	<b>Accounting Information:</b>	
	<b>Gross Profit</b>	15% of Sales
	Net Profit	8% of sales
	Raw materials consumed	20% of works cost
	Direct Wages	10% of works cost
	Stock of raw materials	3 months' usage
	Stock of finished goods	6% of works cost
	Debt collection period	60 days
	All sales are on credit	
<b>II</b>	<b>Financial Ratios:</b>	
	<b>Fixed assets to sales</b>	1:3
	Fixed assets to Current assets	13:11
	Current ratio	2:1
	Long – term loans to Current liabilities	2:1
	Capital to Reserves and Surplus	1:4

If value of fixed assets as on 31<sup>st</sup> December, 2015 amounted to ₹ 26 lakhs, prepare a summarised Profit and Loss Account of the company for the year ended 31<sup>st</sup> December, 2016 and also the Balance Sheet as on 31<sup>st</sup> December, 2016.

**Q.5.** The assets of SONA Ltd. consist of fixed assets and current assets, while its current liabilities comprise bank credit in the ratio of 2: 1. You are required to prepare the Balance Sheet of the company as on 31st March 2016 with the help of following information:

Share Capital	₹ 5, 75,000
Working Capital (CA-CL)	₹ 1, 50,000
Gross Margin	25%
Inventory Turnover	5 times
Average Collection Period	1.5 months
Current Ratio	1.5:1
Quick Ratio	0.8: 1
Reserves & Surplus to Bank & Cash	4 times
Assume 360 days in a year	

**CHAPTER 2**

**LEVERAGES**

**Q.1.** A company had the following Balance Sheet as on 31<sup>st</sup> March, 2014:

Liabilities	(₹ in crores)	Assets	(₹ in crores)
Equity Share Capital (50 lakhs shares of ₹ 10 each)	5		
Reserves and Surplus	1	Fixed Assets (Net)	12.5
15% Debentures	10	Current Assets	7.5
Current Liabilities	4		
	<b>20</b>		<b>20</b>

The additional information given is as under:

Fixed cost per annum (excluding interest)	₹ 4 crores
Variable operating cost ratio	65%
Total asset turnover ratio	2.5
Income Tax rate	30%

Required:

Calculate the following:

- (i) Earnings Per Share
- (ii) Operating Leverage
- (iii) Financial Leverage
- (iv) Combined Leverage

**Q.2.** A firm has sales of ₹ 75, 00,000 variable cost is 56% and fixed cost is ₹ 6, 00,000. It has a debt of ₹ 45, 00,000 at 9% and equity of ₹ 55, 00,000.

- (i) What is the firm's ROI?
- (ii) Does it have favourable financial leverage?
- (iii) If the firm belongs to an industry whose capital turnover is 3, does it have a high or low capital turnover?
- (iv) What are the operating, financial and combined leverages of the firm?
- (v) If the sales is increased by 10% by what percentage EBIT will increase?
- (vi) At what level of sales the EBT of the firm will be equal to zero?
- (vii) If EBIT increases by 20%, by what percentage EBT will increase?

**Q.3.** The operating income of a textile firm amounts to ₹ 1,86,000. It pays 50% tax on its income. Its capital structure consists of the following :

14% Debentures	₹ 5,00,000
15% Preference Shares	₹ 1,00,000
Equity Shares (₹ 100 each)	₹ 4,00,000

- (i) Determine the firm's EPS
- (ii) Determine the percentage change in EPS associated with 30% change (both increase and decrease) in EBIT.
- (iii) Determine the degree of financial leverage at the current level of EBIT.
- (iv) What additional data do you need to compute operating as well as combined leverage?

**Q.4.** A firm's details are as under:

Sales (@100 per unit)	₹ 24, 00,000
Variable Cost	50%
Fixed Cost	₹ 10, 00,000

It has borrowed ₹ 10, 00,000 @ 10% p.a. and its equity share capital is ₹ 10, 00,000 (₹ 100 each)

Calculate:

- (a) Operating Leverage
- (b) Financial Leverage
- (c) Combined Leverage

**CHAPTER 3**

**CAPITAL STRUCTURE**

- Q.1.** The Adarsh Ltd. is considering methods to finance its investment proposal. It is estimated that initially ₹ 4,00,000 will be needed. Two alternative methods of raising funds are available to the firm : (a) Issue of 15% Loan amounting to ₹ 2,00,000 and issue of 2,000 equity shares of ₹ 100 each; and (b) Issue of 4,000 equity shares of ₹ 100 each. The appropriate tax rate is 35 per cent.
- (i) Assuming operating profits (EBIT) of : (a) ₹ 70,000, and (b) ₹ 80,000, which financing proposal would you recommend and why?
  - (ii) Compute the indifference point of the two financial plans & also verify the same.
  - (iii) Calculate FBEP.

- Q.2.** Shahji Steels Limited requires ₹ 25, 00,000 for a new plant. This plant is expected to yield earnings before interest and taxes of ₹ 5, 00,000. While deciding about the financial plan, the company considers the objective of maximizing earnings per share. It has three alternatives to finance the project - by raising debt of ₹ 2, 50,000 or ₹ 10, 00,000 or ₹ 15, 00,000 and the balance, in each case, by issuing equity shares. The company's share is currently selling at ₹ 150, but is expected to decline to ₹ 125 in case the funds are borrowed in excess of ₹10, 00,000. The funds can be borrowed at the rate of 10 percent upto ₹ 2, 50,000, at 15 percent over ₹ 2, 50,000 and upto ₹ 10, 00,000 and at 20 percent over ₹ 10, 00,000. The tax rate applicable to the company is 50 percent. Which form of financing should the company choose?

- Q.3.** Ganapati Limited is considering three financing plans. The key information is as follows:
- (a) Total investment to be raised ₹ 2, 00,000
  - (b) Plans of Financing Proportion:

Plans	Equity	Debt	Preference Shares
A	100%	-	-
B	50%	50%	-
C	50%	-	50%

- (c) Cost of debt 8%
  - Cost of preference shares 8%
  - (d) Tax rate 50%
  - (e) Equity shares of the face value of ₹ 10 each will be issued at a premium of ₹ 10 per share.
  - (f) Expected EBIT is ₹ 80,000.
- You are required to determine for each plan: -
- (i) Earnings per share (EPS)
  - (ii) The financial break-even point.
  - (iii) Indicate if any of the plans dominate and compute the EBIT range among the plans for indifference.

## CHAPTER 4

## COST OF CAPITAL

- Q.1.** (a) A company issues ₹ 10,00,000 16% Debentures of ₹ 100 each. The company is in 35% tax bracket. You are required to calculate the cost of debt after tax, if debentures are issued at (i) Par, (ii) 10% discount and (iii) 10% premium.
- (b) If brokerage is paid at 2% what will be the cost of the debentures if the issue is at premium of 10%.
- Q.2.** The share of ABC Ltd. is presently traded at ₹ 50 and the company is expected to pay dividends of ₹ 4 per share with a growth rate expected at 8% p.a. It plans to raise fresh equity share capital. The merchant banker has suggested that an under pricing of the Re. 1 is necessary in pricing the new issue besides involving a cost of 50 paise per share on misc. expenses. Find out the cost of existing shares as well as the new equity given that the dividend rate and growth rate are not expected to change.
- Q.3.** Five years ago, Sona Limited issued 12 per cent irredeemable debentures at ₹ 103, at ₹ 3 premium to their par value of ₹ 100. The current market price of these debentures is ₹ 94. If the company pays corporate tax at a rate of 35 per cent what is its current cost of debenture capital?
- Q.4.** Masco Limited wishes to raise additional finance of ₹ 10 lakhs for meeting its investment plans. It has ₹ 2,10,000 in the form of retained earnings available for investment purposes. Further details are as following:
- |                                      |                  |
|--------------------------------------|------------------|
| (1) Debt / equity mix                | 30%/70%          |
| (2) Cost of debt                     |                  |
| Upto ₹ 1,80,000                      | 10% (before tax) |
| Beyond ₹ 1,80,000                    | 16% (before tax) |
| (3) Earnings per share               | ₹ 4              |
| (4) Dividend pay-out                 | 50% of earnings  |
| (5) Expected growth rate in dividend | 10%              |
| (6) Current market price per share   | ₹ 44             |
| (7) Tax rate                         | 50%              |
- You are required:
- (a) To determine the pattern for raising the additional finance.
- (b) To determine the post-tax average cost of additional debt.
- (c) To determine the cost of retained earnings and cost of equity, and
- (d) Compute the overall weighted average after tax cost of additional finance.
- Q.5.** Y Ltd. retains ₹ 7,50,000 out of its current earnings. The expected rate of return to the shareholders, if they had invested the funds elsewhere is 10%. The brokerage is 3% and the shareholders come in 30% tax bracket. Calculate the cost of retained earnings.

**Q.6.** ABC Limited has the following book value capital structure:

Equity Share Capital (150 million shares, ₹ 10 par)	₹ 1,500 million
Reserves and Surplus	₹ 2,250 million
10.5% Preference Share Capital (1 million shares, ₹ 100 par)	₹ 100 million
9.5% Debentures (1.5 million debentures, ₹ 1,000 par)	₹ 1,500 million
8.5% Term Loans from Financial Institutions	₹ 500 million

The debentures of ABC Limited are redeemable after three years and are quoting at ₹ 981.05 per debenture. The applicable income tax rate for the company is 35%.

The current market price per equity share is ₹ 60. The prevailing default-risk free interest rate on 10- year GOI Treasury Bonds is 5.5%. The average market risk premium is 8%. The beta of the company is 1.1875.

The preferred stock of the company is redeemable after 5 years is currently selling at ₹ 98.15 per preference share.

Required:

- (i) Calculate weighted average cost of capital of the company using market value weights.
- (ii) Define the marginal cost of capital schedule for the firm if it raises ₹ 750 million for a new project. The firm plans to have a debt of 20% of the newly raised capital. The beta of new project is 1.4375. The debt capital will be raised through term loans, it will carry interest rate of 9.5% for the first ₹ 100 million and 10% for the next ₹ 50 million.

**Q.7.** There are two firms P and Q which are identical except P does not use any debt in its capital structure while Q has ₹ 8,00,000, 9% debentures in its capital structure. Both the firms have earnings before interest and tax of ₹ 2,60,000 p.a. and the capitalisation rate is 10%. Assuming the corporate tax of 30%, calculate the value of these firms according to MM Hypothesis.

**Q.8.** RES Ltd. is an all equity financed company with a market value of ₹ 25,00,000 and cost of equity,  $k_e = 21\%$ . The company wants to buyback equity shares worth ₹ 5,00,000 by issuing and raising 15% perpetual debt of the same amount. Rate of tax may be taken as 30%. After the capital restructuring and applying MM Model (with taxes), you are required to calculate :

- (i) Market value of RES Ltd.
- (ii) Cost of Equity  $k_e$
- (iii) Weighted average cost of capital and comment on it.



**CHAPTER 5**

**CAPITAL BUDGETING**

**Q.1.** ABC Ltd is a small company that is currently analyzing capital expenditure proposals for the purchase of equipment; the company uses the net present value technique to evaluate projects. The capital budget is limited to ₹ 500,000 which ABC Ltd believes is the maximum capital it can raise. The initial investment and projected net cash flows for each project are shown below. The cost of capital of ABC Ltd is 12%. You are required to compute the NPV of the different projects.

	Project A	Project B	Project C	Project D
Initial Investment	200,000	1,90,000	2,50,000	2,10,000
Project Cash Inflows				
Year 1	50,000	40,000	75,000	75,000
2	50,000	50,000	75,000	75,000
3	50,000	70,000	60,000	60,000
4	50,000	75,000	80,000	40,000
5	50,000	75,000	1,00,000	20,000

**Q.2.** A company proposes to install a machine involving a Capital Cost of ₹ 3,60,000. The life of the machine is 5 years and its salvage value at the end of the life is nil. The machine will produce the net operating income after depreciation of ₹ 68,000 per annum. The Company's tax rate is 45%.

The Net Present Value factors for 5 years are as under:

Discounting Rate :	14	15	16	17	18
Cumulative factor:	3.43	3.35	3.27	3.20	3.13

You are required to calculate the internal rate of return of the proposal.

**Q.3.** Shiva Limited is planning its capital investment programme for next year. It has five projects all of which give a positive NPV at the company cut-off rate of 15 percent, the investment outflows and present values being as follows:

Project	Investment ₹'000	NPV@15% ₹'000
A	(50)	15.4
B	(40)	18.7
C	(25)	10.1
D	(30)	11.2
E	(35)	19.3

The company is limited to a capital spending of ₹ 1, 20,000.

You are required to optimise the returns from a package of projects within the capital spending limit. The projects are independent of each other and are divisible (i.e., part-project is possible).

**Q.4.** A hospital is considering purchasing a diagnostic machine costing ₹ 80,000. The projected life of the machine is 8 years and has an expected salvage value of ₹ 6,000 at the end of 8 years.

The annual operating cost of the machine is ₹ 7,500. It is expected to generate revenues of ₹40,000 per year for eight years. Presently, the hospital is outsourcing the diagnostic work and is earning commission income of ₹ 12,000 per annum; net of taxes.

Required:

Whether it would be profitable for the hospital to purchase the machine? Give your recommendation under:

- (i) Net Present Value method
  - (ii) Profitability Index method.
- PV factors at 10% are given below:

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
0.909	0.826	0.751	0.683	0.621	0.564	0.513	0.467

**Q.5.** Given below are the data on a capital project 'M'.

Annual savings in cost	₹ 60,000
Useful life	4 years
Internal rate of return	15%
Profitability index	1.064
Salvage value	0

You are required to calculate for this project M :

- (i) Cost of project
- (ii) Payback period
- (iii) Cost of capital
- (iv) Net present value

PV factors at different rates are given below:

Discount factor	15%	14%	13%	12%
1 year	0.869	0.877	0.885	0.893
2 year	0.756	0.769	0.783	0.797
3 year	0.658	0.675	0.693	0.712
4 year	0.572	0.592	0.613	0.636

**Q.6.** Company X is forced to choose between two machines A and B. The two machines are designed differently, but have identical capacity and do exactly the same job. Machine A costs ₹ 1,50,000 and will last for 3 years. It costs ₹ 40,000 per year to run. Machine B is an 'economy' model costing only ₹ 1,00,000, but will last only for 2 years, and costs ₹ 60,000 per year to run. Ignore tax. Opportunity cost of capital is 10 per cent. Which machine company X should buy?

**Q.7.** A Ltd. is considering the purchase of a machine which will perform some operations which are at present performed by workers. Machines X and Y are alternative models. The following details are available:

	Machine X	Machine Y
	(₹)	(₹)
Cost of machine	1,50,000	2,40,000
Estimated life of machine	5 year	6 years
Estimated cost of maintenance p.a.	7,000	11,000
Estimated cost of indirect material, p.a.	6,000	8,000
Estimated savings in scrap p.a.	10,000	15,000
Estimated cost of supervision p.a.	12,000	16,000
Estimated savings in wages pa	90,000	1,20,000

Depreciation will be charged on straight line basis. The tax rate is 30%. Evaluate the alternatives according to:

- (i) Average rate of return method, and
  - (ii) Present value index method assuming cost of capital being 10%.
- (The present value of ₹ 1.00 @ 10% p.a. for 5 years is 3.79 and for 6 years is 4.354)

**Q.8.** Elite Cooker Company is evaluating three investment situations: (1) produce a new line of aluminium skillets, (2) expand its existing cooker line to include several new sizes, and (3) develop a new, higher-quality line of cookers. If only the project in question is undertaken, the expected present values and the amounts of investment required are:

<b>Project</b>	<b>Investment required</b>	<b>Present value of Future Cash-Flows</b>
	<b>₹</b>	<b>₹</b>
<b>1</b>	2,00,000	2,90,000
<b>2</b>	1,15,000	1,85,000
<b>3</b>	2,70,000	4,00,000

If projects 1 and 2 are jointly undertaken, there will be no economies; the investments required and present values will simply be the sum of the parts. With projects 1 and 3, economies are possible in investment because one of the machines acquired can be used in both production processes. The total investment required for projects 1 and 3 combined is ₹ 4,40,000. If projects 2 and 3 are undertaken, there are economies to be achieved in marketing and producing the products but not in investment. The expected present value of future cash flows for projects 2 and 3 is ₹ 6,20,000. If all three projects are undertaken simultaneously, the economies noted will still hold. However, a ₹ 1,25,000 extension on the plant will be necessary, as space is not available for all three projects. Which project or projects should be chosen?

**Q.9.** A Ltd. is an all equity financial company. The current market price of share is ₹ 180. It has just paid a dividend of ₹ 15 per share and expected future growth in dividend is 12%. Currently, it is evaluating a proposal requiring funds of ₹ 20 lakhs, with annual inflows of ₹ 10 lakhs for 3 years.

Find out the Net Present Value of the proposal, if

- (i) It is financed from retained earnings; and
- (ii) It is financed by issuing fresh equity at market price with a floatation cost of 5% of issue price.

**CHAPTER – 6**

**CAPITAL BUDGETING & RISK ANALYSIS**

**Q.1.** Determine the risk adjusted net present value of the following projects:

	<b>X</b>	<b>Y</b>	<b>Z</b>
Net cash outlays	2,10,000	1,20,000	1,00,000
Project life	5 years	5 years	5 years
Annual Cash inflow	70,000	42,000	30,000
Coefficient of variation	1.2	0.8	0.4

The Company selects the risk-adjusted rate of discount on the basis of the coefficient of variation:

<b>Coefficient of Variation</b>	<b>Risk-Adjusted Rate of Return</b>	<b>P.V. Factor 1 to 5 years At risk adjusted rate of discount</b>
0.0	10%	3.791
0.4	12%	3.605
0.8	14%	3.433
1.2	16%	3.274
1.6	18%	3.127
2.0	22%	2.864
More than 2.0	25%	2.689

**Q.2.** The Textile Manufacturing Company Ltd., is considering one of two mutually exclusive proposals, Projects M and N, which require cash outlays of ₹ 8, 50,000 and ₹ 8, 25,000 respectively. The certainty-equivalent (C.E) approach is used in incorporating risk in capital budgeting decisions. The current yield on government bonds is 6% and this is used as the risk free rate. The expected net cash flows and their certainty equivalents are as follows:

<b>Year – end</b>	<b>Project M</b>		<b>Project N</b>	
	<b>Cash Flow</b>	<b>C.E.</b>	<b>Cash Flow</b>	<b>C.E.</b>
1	4,50,000	0.8	4,50,000	0.9
2	5,00,000	0.7	4,50,000	0.8
3	5,00,000	0.5	5,00,000	0.7

Present value factors of ₹ 1 discounted at 6% at the end of year 1, 2 and 3 are 0.943, 0.890 and 0.840 respectively.

**Required:**

- (i) Which project should be accepted?
- (ii) If risk adjusted discount rate method is used, which project would be appraised with a higher rate and why?

**Q.3.** From the following details relating to a project, analyse the sensitivity of the project to changes in initial project cost, annual cash inflow and cost of capital:

Initial Project Cost (₹)	1,20,000
Annual Cash Inflow (₹)	45,000
Project Life (Years)	4
Cost of Capital	10%

To which of the three factors, the project is most sensitive if the variable is adversely affected by 10%? (Use annuity factors: for 10% 3.169 and 11% ...3.103).

**Q.4.** Probabilities for net cash flows for 3 years a project are as follows:

Year 1		Year 2		Year 3	
Cash Flow (₹)	Probability	Cash Flow (₹)	Probability	Cash Flow (₹)	Probability
2,000	0.1	2,000	0.2	2,000	0.3
4,000	0.2	4,000	0.3	4,000	0.4
6,000	0.3	6,000	0.4	6,000	0.2
8,000	0.4	8,000	0.1	8,000	0.1

Calculate the expected net cash flows. Also calculate the present value of the expected cash flow, using 10 per cent discount rate. Initial Investment is ₹ 10,000.

**Q.5.** A firm has an investment proposal, requiring an outlay of ₹ 80,000. The investment proposal is expected to have two years' economic life with no salvage value. In year 1, there is a 0.4 probability that cash inflow after tax will be ₹ 50,000 and 0.6 probability that cash inflow after tax will be ₹ 60,000. The probability assigned to cash inflow after tax for the year 2 is as follows:

Year	Cash Flow (₹)	Probability	Cash Flow (₹)	Probability
Year – 1	₹ 50,000	0.6	₹ 60,000	0.4
Year - 2				
	₹ 24,000	0.2	₹ 40,000	0.4
	₹ 32,000	0.3	₹ 50,000	0.5
	₹ 44,000	0.5	₹ 60,000	0.1

The firm uses a 10% discount rate for this type of investment.

**Required:**

- (i) Construct a decision tree for the proposed investment project and calculate the expected net present value (NPV).
- (ii) What net present value will the project yield, if worst outcome is realized? What is the probability of occurrence of this NPV?
- (iii) What will be the best outcome and the probability of that occurrence?
- (iv) Will the project be accepted?

(Note: 10% discount factor 1 year 0.909; 2 years 0.826)

**CHAPTER 7**

**LEASING DECISIONS**

**Q.1.** Sundaram Ltd. discounts its cash flows at 16% and is in the tax bracket of 35%. For the acquisition of a machinery worth ₹ 10,00,000, it has two options – either to acquire the asset by taking a bank loan @ 15% p.a. repayable in 5 yearly instalments of ₹ 2,00,000 each plus interest or to lease the asset at yearly rentals of ₹ 3,34,000 for five (5) years. In both the cases, the instalment is payable at the end of the year.

Depreciation is to be applied at the rate of 15% using ‘written down value’ (WDV) method. You are required to advise which of the financing options is to be exercised and why.

Year	1	2	3	4	5
P.V factor @16%	0.862	0.743	0.641	0.552	0.476

**Q.2.** Fair finance, a leasing company, has been approached by a prospective customer intending to acquire a machine whose Cash Down price is ₹ 3 crores. The customer, in order to leverage his tax position, has requested a quote for a three year lease with rentals payable at the end of each year but in a diminishing manner such that they are in the ratio of 3: 2: 1.

Depreciation can be assumed to be on straight line basis and Fair Finance’s marginal tax rate is 35%. The target rate of return for Fair Finance on the transaction is 10%.

Required:

Calculate the lease rents to be quoted for the lease for three years.

**Q.3.** ABC Ltd. sells computer services to its clients. The company has recently completed a feasibility study and decided to acquire an additional computer, the details of which are as follows:

- (1) The purchase price of the computer is ₹ 2, 30,000; maintenance, property taxes and insurance will be ₹ 20,000 per year. The additional expenses to operate the computer are estimated at ₹ 80,000. If the computer is rented from the owner, the annual rent will be ₹ 85,000, plus 5% of annual billings. The rent is due on the last day of each year.
- (2) Due to competitive conditions, the company feels that it will be necessary to replace the computer at the end of three years with a more advanced model. Its resale value is estimated at ₹ 1, 10,000.
- (3) The corporate income tax rate is 50% and the straight line method of depreciation is followed.
- (4) The estimated annual billing for the services of the new computer will be ₹ 2, 20,000 during the first year, and ₹ 2, 60,000 during the subsequent two years.
- (5) If the computer is purchased, the company will borrow to finance the purchase from a bank with interest at 16% per annum. The interest will be paid regularly, and the principal will be returned in one lump sum at the end of the year 3.

Should the company purchase the computer or lease it? Assume (i) straight line method of depreciation, (ii) salvage value of ₹ 1, 10,000 and evaluate the proposal from the point of view of lessor if its cost of capital is also 12%.

**CHAPTER – 8**

**DIVIDEND POLICY**

**Q.1.** The earnings per share of a company are ₹ 8 and the rate of capitalisation applicable to the company is 10%. The company has before it an option of adopting a pay-out ratio of 25% or 50% or 75%. Using Walter's formula of dividend pay-out compute the market value of the company's share if the productivity of retained earnings is (i) 15% (ii) 10%, and (iii) 5%.

What inference can be drawn from the above exercise?

**Q.2.** A firm had been paid dividend at ₹ 2 per share last year. The estimated growth of the dividends from the company is estimated to be 5% p.a. Determine the estimated market price of the equity share if the estimated growth rate of dividends (i) rises to 8%, and (ii) falls to 3%. Also find out the present market price of the share, given that the required rate of return of the equity investors is 15.5%.

**Q.3.** With the help of following figures calculate the market price of a share of a company by using:

- (i) Walter's formula
- (ii) Dividend growth model (Gordon's formula)

Earnings per share (EPS)	₹ 10
Dividend per share (DPS)	₹ 6
Cost of capital (k)	20%
Internal rate of return on investment	25%
Retention Ratio	60%

**Q.4.** RST Ltd. has a capital of ₹ 10, 00,000 in equity shares of ₹ 100 each. The shares are currently quoted at par. The company proposes to declare a dividend of ₹ 10 per share at the end of the current financial year. The capitalization rate for the risk class of which the company belongs is 12%. What will be the market price of the share at the end of the year, if

- (i) A dividend is not declared?
- (ii) A dividend is declared?
- (iii) Assuming that the company pays the dividend and has net profits of ₹ 5, 00,000 and makes new investments of ₹ 10, 00,000 during the period, how many new shares must be issued? Use the MM model.

**CHAPTER – 9**

**ESTIMATION OF WORKING CAPITAL**

**Q.1.** The following annual figures relate to XYZ Co.

	₹
Sales (at two months' credit)	36,00,000
Materials consumed (Suppliers extend two months' credit)	9,00,000
Wages paid (monthly in arrears)	7,20,000
Manufacturing expenses outstanding at the end of the year (Cash expenses are paid one month in arrears)	80,000
Total administrative expenses, paid as above	2,40,000
Total Sales promotion expenses, paid quarterly in advance	1,20,000

The company sells its products on gross profit of 25% counting depreciation as part of the cost of production. It keeps one month's stock each of raw materials and finished goods, and a cash balance of ₹ 1,00,000.

Assuming a 20% safety margin, work out the working capital requirements of the company on cash cost basis. Ignore work-in-process.

**Q.2.** Bhargava Ltd. furnishes you with the following details with the request to calculate the estimated working capital requirements on total basis for the year 2011-12.

- (1) Credit : Two months credit to domestic customers and three months to overseas buyers. Suppliers to give one months credit.
- (2) Time Lag : One month in respect of all the expenses except sales promotion expenses which are payable in advance on quarterly basis.
- (3) Projected figures for the year 2011-12 :

	₹
Domestic Sales	1,80,000
Export Sales	36,000
Wages	42,000
Manufacturing Expenses	57,000
Administrative Expenses	60,000
Sales Promotion Expenses	30,000

- (4) Inventories to be maintained as follows :  
 Raw materials : One month for domestic and two months for export supplies  
 Finishes Goods : One month for domestic and three months for export supplies.
- (5) Gross profit is to be maintained at 25% on sales, while overseas buyers are to be allowed a special 10% discount.
- (6) Special Packing Credit Limits are available on 90 % of export stocks of raw materials debtors.
- (7) An additional cash balance is to be maintained as safety margin which is equivalent to 10% of total working capital.

**Q.3.** A newly formed company has applied to the Commercial Bank for the first time for financing its working capital requirements. The following information is available about the projections for the current year:

	Per unit (₹)
Elements of cost:	
Raw material	40
Direct labour	15
Overhead	<u>30</u>
Total cost	85
Profit	<u>15</u>
Sales	<u>100</u>



**Other information:**

Raw material in stock: average 4 weeks consumption, Work – in progress (completion stage, 50 per cent), on an average half a month. Finished goods in stock: on an average, one month.

Credit allowed by suppliers is one month.

Credit allowed to debtors is two months.

Average time lag in payment of wages is 1½ weeks and 4 weeks in overhead expenses.

Cash in hand and at bank is desired to be maintained at ₹ 50,000.

All Sales are on credit basis only.

**Required:**

Prepare statement showing estimate of working capital needed to finance an activity level of 96,000 units of production. Assume that production is carried on evenly throughout the year, and wages and overhead accrue similarly. For the calculation purpose 4 weeks may be taken as equivalent to a month and 52 weeks in a year.

**Q.4.** The following information is provided by the DPS Limited for the year ending 31<sup>st</sup> March, 2013.

Raw material storage period	55 days
Work-in-progress conversion period	18 days
Finished Goods storage period	22 days
Debt collection period	45 days
Creditors' payment period	60 days
Annual Operating cost (Including depreciation of ₹ 2, 10,000) [1 year = 360 days]	₹ 21, 00,000

**You are required to calculate:**

- (i) Operating Cycle period.
- (ii) Number of Operating Cycle in a year.
- (iii) Amount of working capital required for the company on a cash cost basis.
- (iv) The company is a market leader in its product, there is virtually no competitor in the market. Based on a market research it is planning to discontinue sales on credit and deliver products based on pre-payments. Thereby, it can reduce its working capital requirement substantially.

What would be the reduction in working capital requirement due to such decision?

**CHAPTER 10**

**RECEIVABLES MANAGEMENT**

**Q.1.** A company currently has an annual turnover of ₹ 10 lakhs and an average collection period of 45 days. The company wants to experiment with a more liberal credit policy on the ground that increase in collection period will generate additional sales. From the following information, kindly indicate which of the policies you would like the company to adopt :

Credit Policy	Increase in collection period	Increase in Sales (₹)	Percentage of default
1	15 days	50,000	2%
2	30 days	80,000	3%
3	40 days	1,00,000	4%
4	60 days	1,25,000	6%

The selling price of the product is ₹ 5, average costs per unit at current level is ₹ 4 and the variable costs per unit is ₹ 3.

The current bad debt loss is 1% and the required rate of return on investment is 20%. A year can be taken to comprise of 360 days.

**Q.2.** PTX Limited is considering a change in its present credit policy. Currently it is evaluating two policies. The company is required to give a return of 20% on the investment in new accounts receivables. The company's variable costs are 70% of the selling price. Information regarding present and proposed policies is as follows:

	Present Policy	Policy Option 1	Policy Option 2
Annual Credit Sales (₹)	30,00,000	42,00,000	45,00,000
Debtors turnover ratio	4 times	3 times	2.4 times
Loss due to bad debts	3% of sales	5% of sales	6% of sales

Note: Return on investment in new accounts receivable is based on cost of investment in debtors.

Which option would you recommend?

**Q.3.** A firm has a current sale of ₹ 2, 56, 48, 750. The firm has unutilised capacity. In order to boost its sales, it is considering the relaxation in its credit policy. The proposed terms of credit will be 60 days credit against the present policy of 45 days. As a result, the bad debts will increase from 1.5% to 2% of sales. The firm's sales are expected to increase by 10%. The variable operating costs are 72% of the sales. The Firm's corporate tax rate is 35%, and it requires an after-tax return of 15% on its investment. Should the firm change its credit period?

**Q.4.** A new customer with 10% risk of non-payment desires to establish business connections with you. He would require 1.5 month of credit and is likely to increase your sales by ₹ 1, 20,000 p.a. Cost of sales amounted to 85% of sales. The tax rate is 30%. Should you accept the offer if the required rate of return is 40% (after tax)?

**Q.5.** A Ltd. has total sales of ₹ 3.2 crores and its average collection period is 90 days. The past experience indicates that bad-debt losses are 1.5% on sales. The expenditure incurred by the firm in administering its receivable collection efforts are ₹ 5, 00,000. A factor is prepared to buy the firm's receivables by charging 2% commission. The factor will pay advance on receivables to the firm at an interest rate of 18% p.a. after withholding 10% as reserve. Calculate the effective cost of factoring to the Firm.

**CHAPTER 11****CASH BUDGET**

- Q.1.** A firm maintains a separate account for cash disbursement. Total disbursements are ₹ 1, 05,000 per month or ₹ 12, 60,000 per year. Administrative and transaction cost of transferring cash to disbursement account is ₹ 20 per transfer. Marketable securities yield is 8% per annum.  
Determine the optimum cash balance according to William J. Baumol model.