CASE SCENARIOS

CASE SCENARIO 01

XYZ Ltd.is a company involved in manufacturing of toys and it is presently all equity financed. The directors of the company have been evaluating investment in a project which will require 400 lakhs capital expenditure on new machinery. They expect the capital investment to provide annual cash flows of 60 lakhs indefinitely which is net of all tax adjustments. The discount rate which it applies to such investment decisions is 12% net.

The directors of the company believe that the current capital structure fails to take advantage of tax benefits of debt and propose to finance the new project with undated perpetual debt secured on the company's assets. The company intends to issue sufficient debt to cover the cost of capital expenditure and the after tax cost of issue.

The current annual gross rate of interest required by the market on corporate undated debt of similar risk is 9%. The after tax costs of issue are expected to be 5% of the investment amount required. Company's tax rate is 30%.

Based on above information, answer the following:

Answer below MCQs based on above case scenario:

1. What is the value of tax relief on interest payment in perpetuity?

Answer - 1 : Rs.12.6 lakhs
Answer - 2 : Rs.126 lakhs
Answer - 3 : Rs.10 lakhs
Answer - 4 : Rs.100 lakhs

2. What is the adjusted present value of the investment?

Answer - 1 : Rs.126 lakhs
Answer - 2 : Rs.208 lakhs
Answer - 3 : Rs.206 lakhs
Answer - 4 : Rs.104 lakhs

3. Annual income required to make NPV to zero

Answer - 1 : Rs.25.68 lakhs
Answer - 2 : Rs.24.64 lakhs
Answer - 3 : Rs.28.64 lakhs
Answer - 4 : Rs.22.52 lakhs

4. What is the adjusted discount rate?

Answer - 1 : 8.80%
Answer - 2 : 7.65%
Answer - 3 : 6.32%
Answer - 4 : 6.11%

5. Circumstances in which ADR may be used to evaluate future investments.

- **i. Business risk of the new venture is identical to the one being evaluated.**
- **ii. The project is to be financed by the same method.**
- **iii. The project is to be financed by the same method on the same terms.**
- **iv. Can be used in any situation.**

Answer - 1 : (i) only
Answer - 2 : (i) and (ii) only
Answer - 3 : (i) and (iii) only
Answer - 4 : (i), (ii), (iii) and (iv)

CASE SCENARIO 02

M/s ARC Ltd is an established entity in the telecommunication industry with 49.95% market share. Most of its telecommunication lines are based on 2G, 3G and 4G spectrum. However now the market is foreseeing a technological disruption in the form of 5G technology. To maintain a competitive advantage, it needs to heavily invest in 5G equipments and deploy the same for users latest by the end of year 3 from now. The entire project is going to cost 9,000 crores. The management is wondering how such a huge amount is going to be raised.

A financial consultant has recently been hired by ARC to evaluate the various ways to raise capital. On the basis of his experience and knowledge, the consultant is of the view that telecom industry should not deploy fixed cost funds in excess of 40% of total capital. Also, preference share capital should not exceed 10% of total capital. ARC currently has 2000 crores in the form of reserves represented by short term money market instruments. It can raise money by way of debentures by issuing them at a premium of 5% with redemption value of Rs. 110 after 5 years. The debentures would require an annual interest payment of Rs. 8 p.a. The preference shares will be issued at a discount of 10% and redeemed at premium of 10% after 10 years requiring an annual dividend of 10%. The company is sceptical of cash flows in near term after deployment of 5G and therefore would issue the above stated debentures only to the extent of 50% of total debt funds and balance will be raised by zero coupon bonds, which will be issued at a discount of 40% and redeemed at par after 5 years. Current price of share od ARC stands at an average of Rs. 147. The company has recently paid dividend of Rs. 11 per share and considering the 5G deployment and other technological requirements in long run, it is likely to continue retaining 56% of its earnings. The reinvested retained earnings are likely to offer a return of 15% to the shareholders. It is planning to raise a part of additional equity by way of rights offering to its shareholders. The rights entitle the existing shareholders to buy shares at a discount of 15% to current average market price. However only 40% of the required fresh equity can be raised by way of right issue. The balance equity portion will be raised by way of new series of equity shares with differential voting rights. They will be promised a dividend of 1.25x of ordinary equity shareholder and due to lower voting rights their cost of capital will require a premium of 50% over ordinary equity shares.

Answer below MCQs on the basis of above case scenario:

6. What will be the amount (in Rs. Crores)of differential voting rights shares to be issued assuming that maximum limits are to be adhered to

Answer - 1 : 2040
Answer - 2 : 1360
Answer - 3 : 2000
Answer - 4 : 900

7. Calculate the cost of debenture using YTM method

	Answer - 1 : 10.76% **Answer - 2 : 8.43%** Answer - 3 : 12.37% Answer - 4 : 16.51%
8.	**Calculate the cost of preference shares using YTM method**
	Answer - 1 : 10.76% Answer - 2 : 8.43% **Answer - 3 : 12.37%** Answer - 4 : 16.51%
9.	**What will be the share price of shares with differential voting rights?**
	Answer - 1 : 91.07 Answer - 2 : 100 Answer - 3 : 124.95 Answer - 4 : 147
10.	**What will be the minimum required return from 5G deployment to breakeven the cost of capital?**
	Answer - 1 : 10.76% Answer - 2 : 8.43% **Answer - 3 : 16.11%** Answer - 4 : 16.51%

CASE SCENARIO 03

Tiago Ltd is an all-equity company engaged in manufacturing of batteries for electric vehicles. There has been a surge in demand for their products due to rising oil prices. The company was established 5 years ago with an initial capital of ₹ 10,00,000 and since then it has raised funds by IPO taking the total paid up capital to ₹ 1 crore comprising of fully paid-up equity shares of face value ₹ 10 each. The company currently has undistributed reserves of ₹ 60,00,000. The company has been following constant dividend payout policy of 40% of earnings. The retained earnings by company are going to provide a return on equity of 20%. The current EPS is estimated as Rs 20 and prevailing PE ratio on the share of company is 15x. The company wants to expand its capital base by raising additional funds by way of debt, preference and equity mix. The company requires an additional fund of ₹ 1,20,00,000. The target ratio of owned to borrowed funds is 4:1 post the fund-raising activity. Capital gearing is to be kept at 0.4x.
The existing debt markets are under pressure due to ongoing RBI action on NPAs of the commercial bank. Due to challenges in raising the debt funds, the company will have to offer ₹ 100 face value debentures at an attractive yield of 9.5% and a coupon rate of 8% to the investors. Issue expenses will amount to 4% of the proceeds.

The preference shares will have a face value of ₹ 1000 each offering a dividend rate of 10%. The preference shares will be issued at a premium of 5% and redeemed at a premium of 10% after 10 years at the same time at which debentures will be redeemed.

The CFO of the company is evaluating a new battery technology to invest the above raised money. The technology is expected to have a life of 7 years. It will generate a after tax marginal operating cash flow of ₹ 25,00,000 p.a. Assume marginal tax rate to be 27%.

Answer below MCQs on the basis of above case scenario:

11. Which of the following is best estimate of cost of equity for Tiago Ltd?

(a) 12.99% (b) 11.99%
(c) 13.99% **(d) 14.99%**

12. Which of the following is the most accurate measure of issue price of debentures?

(a) 100 (b) 96
(c) 90.58 (d) 95.88

13. Which of the following is the best estimate of cost of debentures to be issued by the company? (Using approximation method)

(a) 7.64% (b) 6.74%
(c) 4.64% (d) 5.78%

14. Calculate the cost of preference shares using approximation method

(a) 10.23% **(b) 9.77%**
(c) 12.12% (d) 12.22%

15. Which of the following best represents the overall cost of marginal capital to be raised?

(a) 10.52% (b) 17.16%
(c) 16.17% (d) 16.71%

CASE SCENARIO 04

ArMore LLP is a newly established startup dealing in manufacture of a revolutionary product HDHMR which is a substitute to conventional wood and plywood. It is an economical substitute for manufacture of furniture and home furnishing. It has been asked by a venture capitalist for an estimated amount of funds required for setting up plant and also the amount of circulating capital required. A consultant hired by the entity has advised that the cost of setting up the plant would be ₹ 5 Crores and it will require 1 year to make the plant operational. The anticipated revenue and associated cost numbers are as follows:

Units to be sold = 3 lakh sq metres p.a.
Sale Price of each sq mtr = ₹ 1000

Raw Material cost = ₹ 200 per sq mtr Labour cost = ₹ 50 per hour

Labour hours per sq mtr = 3 hours

Cash Manufacturing Overheads = ₹ 75 per machine hour

With meticulous planning and efficient teams prepared for execution, the management exudes confidence in the project's success. The Vilartment initiative aspires to solidify Kinglike WLL's position as a leading global real estate company.

Machine hours per sq mtr = 2 hours

Selling and credit administration Overheads = ₹ 250 per sq mtr

Being a new product in the industry, the firm will have to give a longer credit period of 3 months to its customers. It will maintain a stock of raw material equal to 15% of annual consumption. Based on negotiation with the creditors, the payment period has been agreed to be 1 month from the date of purchase. The entity will hold finished goods equal to 2 months of units to be sold. All other expenses are to be paid one month in arrears. Cash and Bank balance to the tune of ₹ 25,00,000 is required to be maintained.

The entity is also considering reducing the working capital requirement by either of the two options:
a) reducing the credit period to customers by a month which will lead to reduction in sales by 5%.
b) Engaging with a factor for managing the receivables, who will charge a commission of 2% of invoice value and will also advance 65% of receivables @ 12% p.a. This will lead to savings in administration and bad debts cost to the extent of ` 20 lakhs and 16 lakhs respectively.

The entity is also considering funding a part of working capital by bank loan. For this purpose, bank has stipulated that it will grant 75% of net current assets as advance against working capital. The bank has quoted 16.5% rate of interest with a condition of opening a current account with it, which will require 10% of loan amount to be minimum average balance.
You being an finance manager, has been asked the following questions:

Answer below MCQs on the basis of above case scenario:

16. **The anticipated profit before tax per annum after the plant is operational is ……….**

(a) 750 Lakh (b) 570 Lakh
(c) 370 Lakh (d) 525 Lakh

17. **The estimated current assets requirement in the first year of operation (debtors calculated at cost) is ……….**

(a) 9,42,50,000 (b) 2,17,08,333
(c) 7,25,41,667 (d) 67,08,333

18. **The net working capital requirement for the first year of operation is ……….**

(a) 9,42,50,000 (b) 2,17,08,333
(c) 7,25,41,667 (d) 67,08,333

19. **The annualised % cost of two options for reducing the working capital is ……….**

	(a) 18.18% and 16.92%	(b) 18.33% and 16.92%
	(c) 18.59% and 18.33%	(d) 16.92% and 19.05%
20.	**What will be the Maximum Permissible Bank Finance by the bank and annualised % cost of the same?**	
	(a) 4,55,03,630 and 18.33%	**(b) 5,44,06,250 and 18.33%**
	(c) 4,45,86,025 and 18.59%	(d) 3,45,89,020 and 19.85%