

**INSTITUTE OF ACTUARIES OF INDIA**

**EXAMINATIONS**

**15<sup>th</sup> July 2022**

**Subject CB1 – Business Finance**

**Time allowed: 3 Hours 30 Minutes (09.30 – 13.00 Hours)**

**Total Marks: 100**

**Q.1)** Which of the following is not an advantage of external growth against internal growth:

- a. An easier & quicker method of growth
- b. An opportunity to acquire experience of the target company
- c. An opportunity to use spare cash for a mature company
- d. Avoids the risk of dealing with firms that lack integrity

[2]

**Q.2)** Company X is a large electronics company and Company Y is a small electronics company. Recently Company X invested in Company Y by purchasing 50% of its shares. What is the relationship of Company X to Company Y?

- a. Competitor company
- b. Associate company
- c. Subsidiary company
- d. Controlling company

[2]

**Q.3)** In case of winding up of a company, who among the below list gets the highest preference for final payoff?

- a. Employees
- b. Preference Shareholders
- c. Floating Charge Debenture Holders
- d. Trade Creditors

[2]

**Q.4)** Which of the following is not a profitability ratio?

- a. Return on capital employed
- b. Asset utilization ratio
- c. Gross Profit margin
- d. Quick ratio

[2]

**Q.5)** Which of the following is not a feature of commercial paper?

- a. Commercial Papers are bearer documents & can be transferred by sale
- b. Commercial Papers are repaid with face value plus agreed interest rate which usually exceeds Government securities
- c. Commercial Papers are unsecured in nature
- d. Commercial Paper is a form of short term borrowing

[2]

**Q.6)** \_\_\_\_\_ enables an organization to measure, understand and communicate the economic, social and environmental effects of their activities. Fill in the blank.

- a. Sustainability reporting

- b. Regulatory reporting
- c. Internal reporting
- d. Integrated reporting

[2]

**Q .7)** Home Assistant, a popular home automation software group, has recently made a plan to launch their own hardware called Home Assistant Yellow. The plan is to raise sufficient capital for manufacturing the hardware. Participants in the crowd funding program will be able to first receive the manufactured system on chip.

This is an example of:

- a. Donation based crowd funding
- b. Reward based crowd funding
- c. Loan based crowd funding
- d. Investment based crowd funding

[2]

**Q .8)** A cloth wholesaler has been very popular and tends to sell his stock every 15 days. His son recently graduated from Premier Business School and is worried that his father's 6-month long credit period policy for their customers, is bad for his business. On digging further, he has realized that his father takes about a year to pay his suppliers. He is testing profitability by calculating his father's working capital cycle. How long will it be?

- a. 6.5 months
- b. 6 months
- c. -5.5 months
- d. -6 months

[2]

**Q .9)** The current implied interbank exchange rate is 1.5% per quarter. What is the price of 3 month interest rate future?

- a. 94
- b. 98.5
- c. 99.25
- d. 97

[2]

**Q .10)** What is Beyond Budgeting?

- a. It uses a cost-plus approach for all account heads
- b. It involves budgeting for beyond a period of 1 year
- c. There is no budget provided but actual performance is used for leaders to compete over
- d. It includes budgeting of external factors which are beyond control of the Company

[2]

- Q .11)** Justify with reasons which type & position of derivative is most appropriate for each of the below scenario:
- i)** A soybean farmer is expected to harvest in two month's time and intends to lock in the prices at close to the current market rate. (1)
  - ii)** Company A can borrow from the market at fixed interest rate of 7% p.a. and floating interest at MIBOR+2%. Company B can borrow from the market at fixed interest rate of 6.5% and floating interest rate at MIBOR+0.5%. Company A wants to lock in the floating rate while company B wants to lock in the fixed rates. (3)
  - iii)** An equity trader is holding long position on a stock expects significant long term growth but also expects the stock to be muted in the short term. He would like to profit from this situation in the short term. (1)  
[5]
- Q .12)** XYZ Ltd. has appointed an external auditor to review its financial statements. In their contract, the audit firm confirmed to provide an audit report at the end of the project.
- i)** What is the scope of an audit report? (1)
  - ii)** Post completion of his audit, the auditor is unable to provide an unqualified opinion but writes the below paragraph. Identify and name the various categories used by the auditor to modify a standard report.
- I have reviewed the financial statements of the Company except some immaterial donations made to ABC NGO. I would also like to draw attention to para 6 of my report where details around change in valuation methods of assets has been highlighted. The Company has provided me with all the required information except that related to payments made to the director Mr. X. In my opinion, the treatment of commissions paid to intermediaries are not in conformity with the accounting principles that are generally accepted in India and that the Company should relook at some of their accounting practices.* (4)  
[5]
- Q .13)** A company operates with a debt equity ratio of 2:1. It pays 5% interest to it's debt holders. It's estimated variance is 300% sq. It operates in a market which has an expected rate of return of 8% & a variance of 200% sq. The correlation between the company's stock and the market is estimated to be 0.40. Risk free rate of return in the country is 5% and has a corporate tax rate of 30%.
- Calculate:
- i)** Equity Beta (1)
  - ii)** Cost of equity (1)
  - iii)** Net cost of debt (1)
  - iv)** WACC (1)

- v) Ungeared beta (1)
- vi) The new WACC if the company plans to increase debt equity ratio to 4:1 (2)
- vii) The company intends to do a Monte Carlo simulation to estimate Capital at Risk at each debt equity level. What limiting factors of Monte Carlo Simulation should the company keep in mind? (3)

**[10]****Q .14)**

- i) What are the types of shares issued by a Company? (1)
- ii) What is a share premium account? (1)
- iii) Where does this share premium account reflect in company financials? (1)
- iv) How else can share premium account be used? (2)

**[5]****Q .15)**

- i) List 5 ways of mitigating risk. (2.5)
- ii) How can each option for mitigation of the risk be evaluated? (2.5)

**[5]****Q .16)** Prepare a trial balance for the following entries

Account head	Amount in Rs.
Revenue	100,000
Building depreciation	5,000
Director's remuneration	10,000
Shareholder reserve	50,000
Administrative expenses	1,000
Wages	2,000
Purchases	50,000
Investment income	5,000
Trade Receivables	5,000
Marketing expenses	1,000

**[5]****Q .17)** What are the limitations of accounts? Explain with examples. **[5]****Q .18)** A large unlisted company is looking to raise capital for capital expansion. It recently got it's short & long debt rated at AAA by a reputed credit rating agency.

- i) Discuss the suitability of each of the following sources of finance in such a scenario:

- a) Preference share capital
- b) Peer to peer lending
- c) Subordinated debt
- d) Project financing
- e) Crowd funding

(5)

ii) The company is contemplating to go public and issue equity shares due to the favorable equity market scenario. Should the company prefer offer for subscription or offer for sale route?

(3)

iii) The company has finally settled on financing the project entirely using different types of debt. The expansion project involves a significantly large outlay of capital, several fold it's current capital base. Concerns have been raised that the project is nonviable and could threaten the financial position of the company if it fails. Discuss contractual theory in the context of the above scenario.

(4)

iv) Another project being evaluated by the company has the below details:

Year	Revenue	Capital Cost	Running Cost	Certainty Equivalent
0	0	100	0	1
1	80	0	40	0.9
2	90	0	40	0.8
3	120	0	40	0.7

The company uses a uniform discount rate of 10% to evaluate all projects. All running costs in the project are direct & proportional to revenue for the given year.

- a) What is the NPV of the project?
- b) Calculate the Receipts/cost ratio of the project.

(6)

v) What are the disadvantages of using high hurdle rates to evaluate projects?

(2)

**[20]**

**Q .19)** ABC Ltd. is a new insure-tech startup based out of Bangalore. A young accountant has joined in the finance team and needs review of his work of preparing financial statements.

- i) Guide him by distributing the following account heads into those having a positive impact on P&L of the Company and those having a negative impact:
  - a. TV commercial fees of a famous cricketer
  - b. Salary of the accountant

- c. Sale of Bitcoin purchased by the Company last year
- d. Decrease in value of owned office space
- e. Interest on loan you took from the Company in personal capacity
- f. Profit sharing agreement with a client who made loss by using your services
- g. Deferred tax liability generated by making higher tax last year, adjusted in current year
- h. Shares awarded to Company employees as perks, which will vest in 2 years
- i. Service fees from a regular client against services provided in last financial year
- j. Valuation of the Company received when participated in recent season of Shark Tank

(5)

ii) Prepare a traditional Balance Sheet for the Company parallel to the accountant for review purposes, using ONLY the following information:

- a. Profit after tax of Rs. 1 crore
- b. Dividend paid on Share capital of Rs. 100 crore with ROE of 0.5%
- c. Interest paid on a new long term Debt of Rs. 50 crore @ 5% p.a.
- d. Computer assets purchased in 2020 of Rs. 25 lac with straight line depreciation at 20% p.a.
- e. Wifi bill overdue for the last 6 months amounting to Rs. 60,000
- f. Purchase of 1,000 "Company I" shares with face value of Rs. 10 per share, currently operating in market at Rs. 500 per share
- g. As per the rent agreement, your Company had to pay 1 year of rent of Rs. 100,000 p.m. in advance while renting this place. Currently only 6 months have passed.
- h. Recent participation on Shark Tank helped create a brand image for the Company which increased valuation of the Company by Rs. 25 crore
- i. The Company had paid 1 year advanced salary to a peon as his mother had passed away recently and the peon has eloped, total loss of Rs. 15,000
- j. Before preparation of these statements, the Company had Rs. 1,49,76,95,000

(15)

**[20]**

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