INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

27th November 2019

Subject CB1 – Business Finance

Time allowed: 3 Hours 15 Minutes (10.15 – 13.30 Hours)

Total Marks: 100

INSTRUCTIONS TO THE CANDIDATES

1. ***Please read the instructions inside the cover page of answer booklet and instructions to examinees sent along with hall ticket carefully and follow without exception.***

2. ***Mark allocations are shown in brackets.***

3. ***Attempt all questions, beginning your answer to each question on a separate sheet. <u>However, answers to objective type questions could be written on the same sheet</u>.***

4. ***Please check if you have received complete Question Paper and no page is missing. If so, kindly get new set of Question Paper from the Invigilator.***

Q.1) While valuing the assets of insurance companies for solvency purpose, regulators stipulate that the fair value change (if positive) is taken as zero. This is an example of concept of

A. Materiality
B. Prudence
C. Matching
D. Accruals **[2]**

Q.2) It is a common practise for the non-life insurers to use the concept of earning to calculate earned premium during the year. This is an example of

A. Accrual concept
B. Matching concept
C. Realisation concept
D. Going concern concept **[2]**

Q.3) A company borrows Rs 1 crores for 6 months to meet its working capital requirement at 8% per annum for which it has to pay the interest in advance. It also has to pay a commitment fee of 0.25% on the amount borrowed. Annual financing cost of this arrangement is:

A. 8.2%
B. 9.2%
C. 9.6%
D. 8.6% **[2]**

Q.4) Beyond budgeting implies:

A. Approach where each activity is re-evaluated each time a budget is produced.
B. Approach where actuals results always exceeding budgeted results.
C. Approach which compares various units of business based on actual results.
D. Approach which starts with unit level and builds up to organisation level. **[2]**

Q.5) Which of the following is not a problem with forecasting?

A. There is no major change in external environment / company specific issues in the future year.
B. Availability of unsuitable data for forecasting.
C. Entry of new competitor unexpectedly into the market with disruptive technology.
D. Inflation and sales revenue are correlated from the data observed. **[2]**

Q.6) Preference shares are generally considered as being more like debt than equity. Which of the following appropriately explains this?

A. The tax treatment of preference dividends
B. The marketability of preference shares
C. The fixed nature of participation in profits
D. The ability to make capital gains or losses **[2]**

Q.7) Which of the following statements is NOT true about Internal Rate of Return (IRR) method of project appraisal

A. IRR may give multiple solutions.
B. IRR is less popular than Net Present Value as a measure of project worth.
C. IRR has the benefit of highlighting the return achieved by the project.
D. IRR is the most reliable means of choosing between mutually exclusive projects. **[2]**

Q.8) Value of Options increases with

A. Volatility
B. Uncertainty
C. Relativity
D. Risk **[2]**

Q.9) Which of the following investors in the derivatives market may find that the contract (they have entered into) is a liability at expiry?

I. Buyer of a call option
II. Writer of a put option
III. Buyer of a put option

A. I only
B. II only
C. III only
D. I and III **[2]**

Q.10) A Zero Coupon bond

A. Does not earn interest on the money invested.
B. Is issued at a discount and redeemed at par.
C. Earns interest at regular intervals.
D. None of the above. **[2]**

Q.11) Mr A is planning to start an actuarial consultancy firm. He might have to borrow in order to fund the initial start-up. A finance consultant has suggested incorporating this business as a Limited Liability Partnership (LLP) Firm in order to avoid all personal risk associated with business liabilities.

Explain whether incorporation would be likely to be a cost-effective way of avoiding personal liability for the consultancy's borrowings. **[5]**

Q.12) Elaborate with examples that the interests of shareholders and lenders can conflict. **[5]**

Q.13) Explain the implications to the shareholders of issuing stock options as part of remuneration. **[5]**

Q.14) What is a swap? Who are the parties in a swap agreement? How is a swap generally priced? What risks are faced by the parties in a swap agreement? **[5]**

Q.15) What happens to the Gross profit and Cash flow of the company for a particular financial year (whether there is an increase / decrease) in the following cases:

i) Property that the company possess has been revalued upwards by Rs 100 crores by the Valuer. (1)

ii) There has been an interest payment of Rs 1000 crores towards Masala bond issued by the company. (1)

iii) There has been an increase in inventory of Rs 500 crores which were manufactured out of raw materials available in the previous year end, ignoring any man power and production cost. (1)

iv) There was a depreciation of plant and machinery to the extent of Rs 250 crores. (1)

v) It was decided to write off Rs 200 crores due to EHFL defaulting. (1)

[5]

Q.16) Explain different ways through which accounts can be manipulated along with example of each. **[5]**

Q.17) Explain the technical account of insurers along with the line items which are usually present in the technical account. **[5]**

Q.18) For a particular perfume marketing company which sells only premium perfumes, there is an annual demand of 2500 units of perfumes in the markets. The company imports the perfumes from its supplier abroad. For placing each order, the company incurs an administration cost of Rs 5 and shipping cost of Rs 15.

Cost of insurance per unit is Rs 2 per annum and other handling cost is Rs 38 per annum per unit. Determine the quantity of perfumes to be made each time and number of orders to be made per annum for the company to minimise the cost it incurs. Also, state the assumptions made in the calculation. **[5]**

Q.19) The following have been extracted from the ratios prepared by an equity analyst for the financial year ending 31/3/2019 for Confidence Co Ltd:

Current ratio	2.70829
Quick ratio	2.03217
Profit margin	21%
ROCE	7.01784%
Inventory turnover period (in days)	108.6889
Trade receivables turnover period (in days)	292
Payable turnover period (in days)	486.667
Debt to Equity ratio	0.324621:1
Asset cover for 9.75% 10 year Non-convertible debenture	43.38563
Asset cover for 10.5% 5 years Unsecured loan	7.230938
Asset cover for 12% 5 years Subordinated loan	3.944148

The following information are also available to you:

- Revenue from Sales during the financial year is 15000 crores out of which sales on credit was for Rs 2500 crores.
- Total purchase of raw material during the year is 1000 crores out of which purchase on credit was for Rs 750 crores and there had been an increase in inventory during the year of Rs 500 crores. There had also been production cost of Rs 1500 crores. There is no other cost involved with respect to manufacturing.
- It may be noted that company adopts straight line depreciation method to account for depreciation and both plant and machinery were bought on 31/3/2016 and 31/3/2017 respectively for Rs 33000 crores and Rs 11000 crores respectively and thought to have a useful life of 33 years and 22 years respectively with residual value of Rs 0.
- There have been only 3 types of borrowings which the company has done.
- Profits after interest are taxed at 25%.
- Interest has been paid by the company only on the debt.
- It has been decided to pay a dividend of Rs 0.10 on each share. Share capital consists of 2500 shares of Rs 10 face value each.
- Tax and dividends are to be paid by the company as on 31/3/2019.
- There had been retained earnings of Rs 2440 crores as on 31/3/2018.
- It has been mandated to have 25% Debenture redemption reserve on outstanding debentures as on 31/3/2019.

Based on the above information please prepare P&L account, Balance sheet of Confidence Co Ltd as on 31/3/2019. **[20]**

Q.20) The company NextGenX Ltd has been facing a challenge on investors relations and same has been manifested in their performance in the stock market.

The board has asked the CEO of the listed company in the pharmaceutical sector to focus on further building investor relations. As part of this initiative, the company disclosed a lot of information about a major investment project that the company had committed itself to.

The Investment Team had conducted a detailed project analysis and was of the opinion that the project's net present value (NPV) was worth roughly 7.5% of the company's market capitalisation. They were, therefore, disappointed that the publication of this information had little or no observable impact on the share price. The published information had not included detailed cash flow projections or details of the required rate of return used to evaluate the cash flows, but it should have been sufficient for shareholders to have been able to determine that the project represented a significant and profitable expansion, with a low risk.

i) Explain why it is theoretically correct to assume that accepting a project with a positive NPV should increase the value of a company by the NPV of the project. (5)

ii) Explain why information about positive NPV project as discussed in (i) may not always have positive impact on the share prices. (5)

iii) Explain why companies should provide information about plans and future prospects to shareholders. (3)

iv) What is information asymmetry? Explain with examples. How does asymmetric information affect the market? (3)

[16]

Q.21) The project generates 2500 in sales and 1500 in costs (excluding depreciation) at date 1. The tax rate is 40%. The discount rate for the project is 20%.

i) What is the cash flow from the project at date 1? (2)

ii) What is the NPV of the project? (1)

iii) Now assume (for this question only) that your suppliers allow you to pay them with a one-year delay, that is, at date 2. How does the NPV of the project change compared to the previous question? (1)

[4]

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