

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA
(An Autonomous Institute Affiliated to AKTU, Lucknow)

MBA

SEM: IV - THEORY EXAMINATION (2025 - 2026)

Subject: Financial Modelling

Time: 3 Hours

Max. Marks: 100

General Instructions:

IMP: Verify that you have received the question paper with the correct course, code, branch etc.

1. This Question paper comprises of **three Sections -A, B, & C**. It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.
2. Maximum marks for each question are indicated on right -hand side of each question.
3. Illustrate your answers with neat sketches wherever necessary.
4. Assume suitable data if necessary.
5. Preferably, write the answers in sequential order.
6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

SECTION-A

20

1. Attempt all parts:-

- | | | |
|-------|---|---|
| (1.1) | Given an investment of rupees 10,000 to be invested for one year. (CO1)(K1) | 1 |
| | (a) it is better to invest in a scheme that pays 10% simple interest | |
| | (b) it is better to invest in a scheme that pays 10% annual compound interest | |
| | (c) both A and B provide the same return | |
| | (d) None of these | |
| (1.2) | The method of converting the amount of future cash into an amount of cash and cash equivalents value in present is known as: (CO1,K1) | 1 |
| | (a) Compounding | |
| | (b) Annuity | |
| | (c) Discounting | |
| | (d) None of these | |
| (1.3) | Debt financing is a cheaper source of finance because of: (CO2,K1) | 1 |
| | (a) Time Value of Money, | |
| | (b) Rate of Interest, | |
| | (c) Tax-deductibility of Interest, | |
| | (d) Dividends not Payable to lenders. | |
| (1.4) | Which of the following sources of funds has an Implicit Cost of Capital? (CO2) (K1) | 1 |
| | (a) Equity share Capital | |
| | (b) Preference Share Capital, | |
| | (c) Debentures, | |
| | (d) Retained earnings. | |

- (1.5) Balance Sheet provides information about financial position of the enterprise : (CO3,K1) 1
- (a) At a Point of Time
 - (b) Over a Period of Time
 - (c) For a Period of Time
 - (d) None of the above
- (1.6) If total assets of a firm are 7 10,00,000 and its non-current assets are 7 6,00,000, what will be the percentage of current assets on total assets ? (CO3) (K1) 1
- (a) 60%
 - (b) 50%
 - (c) 40%
 - (d) 0.3
- (1.7) Two mutually exclusive projects are being considered. Neither project will be repeated again, in the future after their current lives are complete. There exists a potential problem though -- the expected life of the first project is one year, and the expected life of the second project is three years. This has caused the NPV and IRR methods to suggest different project preferences. What technique can be used to help make a better decision in this scenario? (CO4)(K1) 1
- (a) Rely on the NPV method and make your choice as it will tell you which one is best.
 - (b) Use the common-life technique to replicate the one-year project three times and recalculate the NPV and IRR for the one-year project.
 - (c) Ignore the NPV technique and simply choose the highest IRR since managers are concerned about maximizing returns.
 - (d) In this situation, we need to rely on the profitability index (PI) method and choose the one with the highest PI
- (1.8) Select the ratio which measures a firm's ability to pay short-term obligations. (CO4,K1) 1
- (a) Return on Assets
 - (b) Quick Ratio
 - (c) Earnings Per Share
 - (d) Debt Ratio
- (1.9) The market risk premium is 15% and the risk-free rate is 5%. The beta of Asset D is 0.2. What is Asset D's expected return under the CAPM?(CO5)(K1) 1
- (a) 8%
 - (b) 30%
 - (c) 20%
 - (d) 0.07
- (1.10) Market risk is also called: (CO5,K1) 1
- (a) nondiversifiable risk and systematic risk.
 - (b) systematic risk and unique risk.
 - (c) unique risk and nondiversifiable risk.

(d) systematic risk and diversifiable risk

2. Attempt all parts:-

- | | | |
|-------|--|---|
| (2.1) | Define financial modeling in simple terms. | 2 |
| (2.2) | Analyse why is the cost of debt most appropriately measured after tax basis. (CO5) | 2 |
| (2.3) | Name two common approaches used in financial forecasting. | 2 |
| (2.4) | State the interpretation of a zero NPV result. | 2 |
| (2.5) | Distinguish between systematic and unsystematic risk with one example each. | 2 |

SECTION-B

30

Answer any one of the following:-

- | | | |
|-------|--|---|
| (3.1) | Explain how financial models are used in real-life situations. Illustrate your answer by applying a financial model (such as budgeting, forecasting, or investment appraisal) to a practical scenario, like planning a business project or managing personal finances.(CO1,K3) | 6 |
| (3.2) | The value of money received in the future is less than the value of money received now. Discuss (CO1)(K2) | 6 |

Answer any one of the following:-

- | | | |
|-------|--|---|
| (3.3) | Explain what does the perpetuity growth method assume about future cash flows? (CO2)(K2) | 6 |
| (3.4) | “Cost of capital is used by a company as a minimum benchmark for its yield”. Comment (CO2)(K2) | 6 |

Answer any one of the following:-

- | | | |
|-------|---|---|
| (3.5) | Analyze how current assets are projected in a balance sheet. Illustrate your answer by analyzing a hypothetical business scenario and explaining how changes in sales, credit policy, or inventory management would affect the projection of current assets. (CO3,K4) | 6 |
| (3.6) | Interest received on debentures would result into inflow, outflow’ or no flow of cash? Give reason.(CO3)(K3) | 6 |

Answer any one of the following:-

- | | | |
|-------|---|---|
| (3.7) | Compare and contrast NPV and IRR as project evaluation techniques.(CO4)(K4) | 6 |
| (3.8) | Discuss the effect of high debt-to-equity ratio on company risk and returns.(CO4)(K2) | 6 |

Answer any one of the following:-

- | | | |
|--------|--|---|
| (3.9) | Illustrate with an example how sensitivity analysis affects investment decisions.(CO5)(K3) | 6 |
| (3.10) | Describe the use of P/E ratio in identifying growth and value stocks.(CO5)(K2) | 6 |

SECTION-C

50

4. Answer any one of the following:-

- | | | |
|-------|---|----|
| (4.1) | In 10 years, what is the value of Rs 10,000 invested today at an interest rate of 12% per year, compounded monthly. Explain how to calculate using excel. (CO1)(K3) | 10 |
| (4.2) | Explain the output of a financial model that is used for decision making and performing financial analysis.(CO1)(K1) | 10 |

5. Answer any one of the following:-

- (5.1) Describe the concept and importance of terminal value in valuation models.(CO2)(K2) 10
- (5.2) Explain how can you determine cost of equity capital in a growth company. (CO2,K2) 10

6. Answer any one of the following:-

- (6.1) Analyze the differences between operating, investing, and financing activities in a cash flow statement. Use examples to show how specific transactions are classified under each activity and how they impact overall cash flow. (CO3,K4) 10
- (6.2) A company had following balances investment in the beginning = 34000 investment at the end = 28000 during the year, company sold 40% of its investments held in the beginning of the period at a profit of 8400. Calculate cash flow from investing activity. Discuss components of cash flow from investing. (CO3,K3) 10

7. Answer any one of the following:-

- (7.1) Calculate the NPV for a project with an initial investment of \$10,000 and annual cash inflows of \$3,000 for 5 years at a discount rate of 10%. (CO4) (K3) 10
- (7.2) **GreenTech Solutions** is considering a project that requires an initial investment of ₹8,000. The project is expected to generate steady cash inflows over the next three years. The company uses a discount rate of 9% to evaluate investment opportunities. The finance team is assessing whether the project's returns justify the upfront cost. Analyze the key financial factors GreenTech Solutions should consider when deciding on this project. Discuss how concepts like the time value of money, cash inflows, and discount rate influence the evaluation. (CO4,K4) 10

8. Answer any one of the following:-

- (8.1) Discuss how macroeconomic factors influence systematic risk and equity prices.(CO5)(K2) 10
- (8.2) Risk-free rate = 2%, expected return on stock = 10%, market return = 12%. Calculate the stock's beta using the CAPM formula. (CO5,K3) 10