

Paper / Subject Code: 7463467 / AIFBA

22/02/2026 Duration: 3Hr [Max Marks: 80]
QP CODE: T523452

N.B.: (1) Question No. 1 is Compulsory.

- (2) Attempt any THREE questions out of the remaining FIVE.
 - (3) All questions carry equal marks.
 - (4) Assume suitable data, if required and state it clearly.
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| Q1. | Attempt any FOUR | [20] |
| a) | What is vectorization in the context of backtesting trading strategies? | [05] |
| b) | Explain various Digital Driven processes used in Technology. | [05] |
| c) | What are two commonly used representations for deploying fraud analytics models? | [05] |
| d) | Discuss on Markov Regime Switching Model. | [05] |
| e) | Why is it important for a prediction-based trading strategy to accurately forecast large market movements? | [05] |
| Q2. | a) Explain GIFT City in detail. | [10] |
| b) | Explain the steps involved in the K-means clustering algorithm and how it works in partitioning data. | [10] |
| Q3. | a) What is the Wishart distribution and how is it related to covariance matrices? | [10] |
| b) | Explain Sharpe Ratio and show with example how Sharpe Ratio can be used to evaluate income statement growth. | [10] |
| Q4. | a) Describe key components of Capital Asset Pricing Model in detail. | [10] |
| b) | Compare between Stop Loss (SL), Trailing Stop Loss (TSL), and Take Profit (TP) orders in trading and explain each with example. | [10] |
| Q5. | a) Explain in detail visualizing covariance and precision matrices. | [10] |
| b) | What is the relationship between prior and posterior distributions in Bayesian analysis? | [10] |
| Q6. | a) Explain concept of infallibility in financial and banking operation. | [10] |
| b) | What is an undirected graph and why is it used? | [10] |
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