JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATIONS- 2026

BBA VI Semester

COURSE CODE (CREDITS): 24B11HS412 (4) MAX MARKS: 35

COURSE NAME: FINANCIAL ANALYTICS

COURSE INSTRUCTOR: ASA MAX. TIME: 2 Hours

Note: (a) All questions are compulsory.

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

(c) Use of calculator is ALLOWED.

Q.No	Question	CO	Marks
Q1	Ms Anvesha, Fund Manager, wants to determine whether Stock PQR should be added to the actively managed portfolio using a multi-factor scoring model. Along with the factor scores, she also observed that institutional investors have recently reduced their holdings in momentum-driven stocks and shifted toward fundamentally stronger companies.	4	2x3 = 6

The following data is available:

Signal Category	Accounting Ratio Score	Momentum Score	Technical Score	Value Driver Score	Characteristic Score
Weight	25%	20%	15%	25%	15%
Score	76	64	59	84	71

Additional Information: A composite score above 75 indicates "Strong Buy"; A score between 65–75 indicates "Watchlist"; A score below 65 indicates "Avoid"

Questions:

a) Calculate the composite weighted score of Stock PQR and classify the stock based on the investment policy.

b) Explain how the weighted scoring model helps fund managers make better investment decisions compared to relying on a single indicator.

c) Identify the two most concerning signals in the analysis and discuss how they may affect future stock performance.

Q2	A BBA student investment group developed a trading model called HighProfit Strategy to trade selected Nifty Next 50 stocks using momentum and volatility indicators and backtested for the period 2021-2025. The strategy started with an initial capital of ₹12,00,000 in 2021 and reached ₹20,40,000 by the end of 2025.	4	1.5x 6 = 9

The yearly portfolio values were as follows:

Year	2021	2022	2023	2024	2025
Beginning Value (₹)	12,00,000	13,80,000	12,90,000	16,20,000	17,10,000
Ending Value (₹)	13,80,000	12,90,000	16,20,000	17,10,000	20,40,000

Additionally: Risk-Free Rate = 5%, Average Annual Return = 16%, Standard Deviation = 14%, Benchmark Market Return = 11%.

The portfolio experienced a decline from a peak value of ₹17,10,000 to a through value of ₹12,90,000 during the testing period. Trading statistics show that out of

	140 trades, 76 trades were profitable. The strategy generated a Gross Profit of ₹6,80,000 and a Gross Loss of ₹3,10,000. **a)** Calculate the annual return for each year. **b)** Calculate the CAGR for the 5-year period. **c)** Calculate the Sharpe Ratio of the strategy. **d)** Calculate the Maximum Drawdown percentage. **e)** Calculate – Win Rate and Profit Factor. **f)** Based on the above analysis, recommend whether the strategy should be implemented using real capital.		
Q3	Mr Yashashwa, an Investment Manager at a mutual fund company, is constructing a diversified portfolio using shares of three companies — Stock X (Banking Sector), Stock Y (IT Sector), and Stock Z (Pharmaceutical Sector). The manager allocates 50% of the funds to Stock X, 30% to Stock Y, and the remaining 20% to Stock Z. The risk (standard deviation) of the individual stocks is estimated as follows: Stock X = 15%, Stock Y = 11%, Stock Z = 9%. The covariance between the stock returns is: Cov(X,Y) = 0.008, Cov(X,Z) = 0.005, Cov(Y,Z) = 0.003. Calculate the portfolio variance and portfolio standard deviation.	3	5
Q4	What do you understand by "Implied Return" and how it is estimated? How one should take investment decision, based on implied return?	2	5
Q5	Briefly discuss "Benford's Law" and its utility in detecting credit card fraud.	1	5
Q6	Write Short Notes (max 50 words) **a)** Time Series Data **b)** Multivariate Analysis of data **c)** Different Data Types **d)** Outliers **e)** Portfolio		1x5 = 5