

**BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT**

(Autonomous Institute under Visvesvaraya Technological University, Belagavi)

USN 

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Course Code 

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| M | B | A | F | M | 4 | 1 | 3 |
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Fourth Semester MBA Degree Examinations, August 2026

**FINANCIAL MODELLING AND ANALYTICS**

Duration: 3 hrs

Max. Marks: 100

**Note:** 1. Answer any FOUR full questions from Question No. 1 to 7.

2. Question No. 8 is compulsory

3. Missing data, if any, may be suitably assumed

| <u>Q. No</u> | <u>Question</u>                                                                                                 | <u>Marks</u> | <u>(RBT:CO:PO)</u> |
|--------------|-----------------------------------------------------------------------------------------------------------------|--------------|--------------------|
| 1            | a. Demonstrate the role of a financial modeller in an organization.                                             | 03           | (3:1:2)            |
|              | b. Evaluate different types of financial models used in business organizations.                                 | 07           | (4:2:3)            |
|              | c. Contemplate the concept, applications, and importance of financial modelling in modern financial management. | 10           | (5:3:4)            |
| 2.           | a. Examine the purpose of formatting Excel sheets in financial modelling.                                       | 03           | (4:2:3)            |
|              | b. Justify the application of IF and AND functions in financial modelling.                                      | 07           | (5:3:2)            |
|              | c. Interpret the role of Excel functions in building effective financial models.                                | 10           | (3:1:2)            |
| 3.           | a. Evaluate the extrapolation in financial forecasting.                                                         | 03           | (5:3:3)            |
|              | b. Illustrate the concept and application of pivot tables in financial analysis.                                | 07           | (3:1:4)            |
|              | c. Explain advanced financial modelling tools used for financial forecasting and analysis.                      | 10           | (4:2:4)            |
| 4.           | a. Examine the concept of financial analytics.                                                                  | 03           | (4:3:4)            |
|              | b. Explain the concept and importance of financial analytics.                                                   | 07           | (4:4:4)            |
|              | c. Justify the concept, features, and importance of financial analytics in modern finance.                      | 10           | (5:5:5)            |
| 5            | a. Explain time series data.                                                                                    | 03           | (4:4:4)            |
|              | b. Explain the concept and components of time series data.                                                      | 07           | (4:5:5)            |
|              | c. Determine time series modelling and its importance in financial forecasting.                                 | 10           | (5:3:3)            |
| 6.           | a. Illustrate Python in financial analytics.                                                                    | 03           | (3:5:5)            |
|              | b. Explain the role of Python in financial analytics.                                                           | 07           | (4:3:3)            |
|              | c. Determine how Python can be used for financial data analysis and modelling.                                  | 10           | (5:4:4)            |

7. a. Identify the different types of financial models. 03 (4:2:3)
- b. Compare different types of financial models used in business organizations. 07 (4:5:5)
- c. Examine different valuation methods used in financial modelling. 10 (4:2:4)

8. **Case Study**

A retail supermarket chain in Bengaluru wants to analyze its monthly sales performance for the past year to improve inventory planning and demand forecasting. The management observed fluctuations in sales due to festive seasons, discount campaigns, and changing consumer demand.

**The data analytics team collected the following monthly sales data (₹ in lakhs):**

| Month     | Sales |
|-----------|-------|
| January   | 120   |
| February  | 128   |
| March     | 135   |
| April     | 150   |
| May       | 160   |
| June      | 158   |
| July      | 170   |
| August    | 180   |
| September | 190   |
| October   | 220   |
| November  | 240   |
| December  | 260   |

- a. Design and identify the “Trend” present in the sales data. 10 (4:4:4)
- b. Design 3 month moving average for the month of March, April, May and June. Contemplate the business decision based on the above observations. 10 (4:4:4)

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