Graphic Era
HILL UNIVERSITY
Established by an Act of the State Legislature of Uttarakhand (Adhiniyam Sankhya 12 of 2011)
University under section 2(f) of UGC Act, 1956

Term Evaluation (Even) Semester Examination March 2025

Roll no.............................

Name of the Course: MBA
Semester: II
Name of the Paper: *BUSINESS ANALYTICS & RESEARCH METHODS*
Paper Code: MBA **204**
Time: 1.5 hour

Maximum Marks: 50

Note:
- (i) This question paper contains two Sections - A and B
- (ii) Both Sections are compulsory
- (iii) Answer any two sub questions from a, b & c in each main question of Section A. Each sub question carries 5 marks.
- (iv) Section B, consisting of a case study, is compulsory. It is of 20 Marks.

Section A

Q1.

(2X5 = 10 Marks)

a) Define Business Analytics and explain the various types of analytics (descriptive, predictive, and prescriptive). CO-1

b) Discuss the importance of data in business decision-making. CO-1

c) Evaluate the role of MS Excel in data analysis. CO-3

Q2.

(2X5 = 10 Marks)

a) Describe the measures of central tendency and measures of dispersion. CO-1

b) Explain how MS Excel's built-in functions and the Data Analysis Tool Pak can be utilized to compute descriptive statistics. CO-2

c) Define linear regression and trend lines. Discuss forecasting techniques such as moving averages and exponential smoothing. CO-2

Q3.

(2X5 = 10 Marks)

a) Define business research. Discuss its nature, scope, and the managerial value it provides in strategic decision-making. CO-1

b) Outline the research process including the formulation of research questions, the review of literature, and the importance of ethics in research. CO-3

c) Explain the key concepts in research such as constructs, definitions, variables, propositions, theories, and models. CO-2

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Section B

Q4. Case Study

(20 Marks) CO-4

ABC Retailers is a medium-sized chain in the consumer electronics segment. Over the past 12 months, the company has tracked its monthly sales figures (in thousands of USD) along with its monthly advertising expenditures (in thousands of USD). The summarized data is presented below:

Month	Sales (USD '000)	Advertising (USD '000)
January	120	15
February	130	18
March	125	16
April	115	14
May	110	13
June	105	12
July	100	10
August	98	9
September	95	8
October	90	7
November	88	8
December	85	7

The management suspects that changes in advertising expenditure might be linked to the declining sales trend observed over the year.

Answer the following questions based on the case study:

a. Compute the measures of central tendency (mean and median) and dispersion (standard deviation) for the monthly sales data.

b. Plot or describe the trend in monthly sales over the year. What insights can you draw about the overall performance?

c. Formulate a hypothesis regarding the effect of advertising expenditure on sales. Clearly state both the null hypothesis (H_0) and the alternative hypothesis (H_1).

d. Outline a research design to validate your hypothesis. Include details on how you would structure the research process, and specify any additional data that might be necessary (e.g., customer surveys, competitor analysis).