

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: BBA/IMBA
BRANCH: MANAGEMENT

SEMESTER : I
SESSION : MO/2024

SUBJECT: MN107 BUSINESS STATISTICS

TIME: 3 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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|--------|--|-------|----|
| Q.1(a) | Explain the scope of the statistics in different fields. | [5] 3 | 2 |
| Q.1(b) | Explain how to draw a pie chart. | [5] 3 | 2 |
| Q.2(a) | What is the main purpose of using measures of central tendency in statistics? | [5] 2 | 2 |
| Q.2(b) | The data below shows a company's annual growth rates (%) over 4 years. Calculate the geometric mean growth rate: | [5] 3 | 3 |

Year	Growth Rate
1	10%
2	15%
3	20%
4	25%

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|--------|--|-------|---|
| Q.3(a) | Briefly explain different measures of variation. | [5] 4 | 2 |
| Q.3(b) | Find the standard deviation of marks for the following data. | [5] 3 | 3 |

C.I(Marks)	No.of students
0-10	12
10-20	18
20-30	27
30-40	20
40-50	17
50-60	6

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|--------|--|-------|---|
| Q.4(a) | Explain simple, partial and multiple correlations. | [5] 4 | 2 |
| Q.4(b) | The data below shows the relationship between the number of study hours (X) and the corresponding examination scores (Y) of five students: | [5] 3 | 3 |

Students	Study Hours (X)	Examination Score (Y)
A	1	2
B	2	3
C	3	5
D	4	4
E	5	6

Find the least square estimators of the slope (b) and intercept (a) for the linear regression equation and construct the Regression Equation.

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|--------|---|-------|---|
| Q.5(a) | What are the four main components of time series? Briefly explain it. | [5] 5 | 2 |
| Q.5(b) | Write down the importance of forecasting in business organization. | [5] 5 | 2 |