M.B.A. 2 Year, 1st Semester (CBCS)
2019-2020 (New Scheme)
Examination, November–2023
BUSINESS STATISTICS AND ANALYTICS
Paper–19IMG21C4

Time allowed : 3 hours] *[Maximum marks : 80*

Note: *This paper consists of **two** sections (**Section A and B**). **Section A is compulsory** and carrying questions of two marks each while **Section B** consists of eight questions of sixteen marks each. The students shall be required to attempt **four** questions from **section- B** selecting **one** question from each unit. All questions carry equal marks.*

Section-A

1. Write short note on the following: - 8×2=16

(a) Quartile deviation

(b) Skewness and Kurtosis

(c) Multiple correlation

(d) Regression lines

(e) Cyclical variation

(f) Secular variation

(g) Hypothesis formulation

(h) ANOVA

Section-B

4×16=64

Unit- I

2. Define standard deviation and coefficient of variation in detail. Find the standard deviation and coefficient of variation for the data given below:

Weekly Wages (Rs.)	150-180	180-210	210-240	240-270	270-300	300-330	330-360	360-390	390-420
No. of workers	18	23	40	25	16	13	8	5	3

3. Highlight the role, importance and scope of statistics in business decision making in detail.

Unit-II

4. Define types of correlation briefly. Find Karl Pearson's coefficient of correlation from the following series of marks of marks secured by 10 students in class test in Mathematics and Statistics:

Marks in Maths	45	70	65	30	90	40	50	75	85	60
Marks in Statistics	35	90	70	40	95	40	60	80	80	50

5. Discuss meaning and types of regression briefly. Also discuss its properties with examples.

Unit-III

6. Explain methods of measuring seasonal variations. Also find seasonal variations by ratio to tend method from the following data:

Year	I-Qr	II-Qr	III-Qr	IV-Qr
1995	30	40	36	34
1996	34	52	50	44
1997	40	58	54	48
1998	54	76	68	62
1999	80	92	86	82

7. Define index numbers. Explain different methods and types of index numbers briefly with examples.

Unit-IV

8. Discuss parametric and non-parametric tests briefly with examples.

9. Define business analytics briefly. Also explain its types and applications with examples.