



K24U 4037

Reg. No. :

Name :

First Semester B.Sc. Degree (C.B.C.S.S. – OBE-Supplementary/
Improvement) Examination, November 2024
(2019 to 2023 Admission)

COMPLEMENTARY ELECTIVE COURSE IN STATISTICS

1C01STA(G and P) : Descriptive Statistics

Time : 3 Hours

Max. Marks : 40

Instruction : Use of calculators and statistical tables are permitted.

PART - A
(Short Answer)

Answer **all 6** questions.

(6×1=6)

1. What are the sources of primary data ?
2. Calculate Geometric mean of 2, 5, 8, 4, 3.
3. Define central moments of a raw data.
4. How will you define sample of a population ?
5. Write any two measures of dispersion.
6. What do you mean by sampling frame ?

PART - B
(Short Essay)

Answer **any 6** questions.

(6×2=12)

7. How will you construct a histogram ?
8. What are the properties of good average ?

P.T.O.



9. Average height of 10 students is 156. Three students of heights 141 cm, 146 cm and 155 cm left the group. What will be the new average height of the group ?
10. Consider a data set of the following numbers : 10, 2, 4, 7, 8, 5, 11, 3, 12. Calculate all the 3 quartiles.
11. Define raw and central moments of a frequency distribution.
12. Calculate mean deviation about mean 8, 5, 9, 11, 7.
13. Distinguish between population and sample.
14. What are the advantages of sampling ?

PART – C
(Essay)

Answer **any 4** questions.

(4×3=12)

15. Distinguish between primary data and secondary data.
16. Calculate the missing frequencies from the following frequency distribution of 200 observations with A.M. 1.46

| | | | | | | |
|----------|----|---|---|----|----|---|
| X | 0 | 1 | 2 | 3 | 4 | 5 |
| F | 46 | — | — | 25 | 10 | 5 |

17. Show that sum of squares of deviations of a set of values is minimum when it is taken about mean.
18. What is quartile deviation ? If first second and third quartiles of a data are 46.07, 53 and 67.49 respectively. Calculate quartile deviation and coefficient of quartile deviation.
19. Explain the methods of measuring skewness and kurtosis of a data.
20. Explain sampling and non-sampling errors.



PART – D
(Long Essay)

Answer any 2 questions.

(2×5=10)

- 21. Explain various ways of presenting frequency distribution graphically ?
- 22. Find mean, median and mode of the data given.

| | | | | | | | | | |
|--------------------------|----|----|----|----|----|----|----|----|----|
| Daily wages (Rs.) | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 |
| No. of persons | 20 | 43 | 75 | 67 | 72 | 45 | 39 | 9 | 8 |

- 23. Explain various measures of dispersion. For the following data, verify the empirical relation $QD \approx \frac{2}{3} MD$.

| | | | | | | | |
|------------------|---------|---------|---------|---------|---------|---------|---------|
| Class | 10 – 20 | 20 – 30 | 30 – 40 | 40 – 50 | 50 – 60 | 60 – 70 | 70 – 80 |
| Frequency | 5 | 12 | 18 | 24 | 17 | 15 | 9 |

- 24. Explain Simple random sampling, Stratified random sampling and Systematic random sampling.

