Reg. No. : ....

Name : ....

First Semester B.Sc. Degree Examination, November 2019

First Degree Programme Under CBCSS

Complementary Course for Geography

ST 1131.3 : DESCRIPTIVE STATISTICS

(2017 Admission onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer all questions - each carrying 1 mark :

1. What do you mean by Nominal Scale?

2. When the distribution is symmetrical, write the relation between Mean, Median and Mode.

3. Write second central moment in terms of raw moments.

4. Define Range.

5. What are the limits of correlation coefficient?

6. Define Skewness.

7. Define Qualitative classification.

8. Define frequency of the observation.

9. Write the relationship between correlation and regression coefficients.

10. Define a scatter diagram.

SECTION – B

Answer **any eight** questions – each carrying **2** marks.

11. Classify the following data on number of family members in the form of frequency table.

    4, 5, 2, 10, 5, 6, 4, 3, 2, 5, 5, 4, 3, 6, 6, 7, 7, 10, 5, 3

12. Define Kurtosis. Write the moment measure of Kurtosis.

13. Draw a suitable diagram for the following data :

Year	Sales (000)	Gross Profit (000)	Net Profit (000)
2000	100	30	10
2001	120	40	15
2002	130	45	25
2003	150	50	25

14. Describe the principle of least squares.

15. Explain scatter diagram.

16. Obtain the Median for the following data 391, 384, 591, 407, 672, 522, 777, 753, 2488, 1490.

17. Define relative frequency.

18. Explain mode with the help of an example.

19. Explain briefly the terms correlation and regression.

20. Explain any four areas in which statistics is used.

21. For a group of 20 items, $\Sigma x = 1452$, $\Sigma x^2 = 144280$ and mode = 63.7. Obtain Karl Pearsons Coefficient of skewness.

22. Write any two properties of regression lines.

(8 × 2 = 16 Marks)

SECTION – C

Answer **any six** questions – each carrying **4** marks.

23. Calculate median of the following data :

Age :	0-10	10-20	20-30	30-40	40-50	50-60
Number of persons :	4	12	28	18	6	2

24. Explain inclusive and exclusive classes with the help of an example.

25. Explain the advantages of tabulation.

26. Explain Pie diagram with the help of an example.

27. The mean weight of 150 students in a certain class is 60 kgs. The mean weight of boys in the class is 70 kgs and that of girls is 55 kgs. Find the number of boys and number of girls in the class.

28. Calculate the mode for the following data.

Age	0-10	10-20	20-30	30-40	40-50	50-60
Number of people	12	18	27	20	17	6

29. Fit a straight line :

X	2	6	5	4	1
Y	4	6	9	6	2

30. Two ladies were asked to rank 7 different types of lipsticks. The ranks given by them are as following. Calculate Spearman's rank correlation coefficient.

Neelu	2	1	4	3	5	7	8
Neena	1	3	2	4	5	6	7

31. For certain X and Y series which are correlated, the two lines of regression are : $5x - 6y + 90 = 0$ and $15x - 8y - 130 = 0$. Find the means of two series and the correlation coefficient.

(6 × 4 = 24 Marks)

SECTION – D

Answer **any two** questions – each carrying **15** marks.

32. Calculate first four moments about the mean and also the values of β_1 and β_2 from the following data :

Marks :	0-10	10-20	20-30	30-40	40-50	50-60	60-70
No. of students :	8	12	20	30	15	10	5

33. Calculate mean and standard deviation for the following data :

Marks :	0-10	10-20	20-30	30-40	40-50	50-60	60-70
No. of students :	5	12	30	45	50	37	21

34. Explain the construction of bar diagrams with the help of examples. Also explain any two uses of each of them

35. Calculate quartile deviation for the following data :

Mid-value (inches) :	12.5	13	13.5	14	14.5	15	15.5	16	16.5
No. of persons :	4	19	30	63	66	29	18	1	1

(2 × 15 = 30 Marks)

———————