

23U370

(Pages: 2)

Name: .....

Reg.No: .....

**THIRD SEMESTER B.Voc. DEGREE EXAMINATION, NOVEMBER 2024**

(CBCSS - UG)

(Regular/Supplementary/Improvement)

**CC21U SDC3 IS07 - INTRODUCTORY STATISTICS**

(Information Technology)

(2021 Admission onwards)

Time : 2.00 Hours

Maximum : 60 Marks

Credit : 3

**Part A** (Short answer questions)

Answer *all* questions. Each question carries 2 marks.

1. Write any two main features of Indian Statistical System.
2. What are the four divisions of NSSO ?
3. Distinguish between primary and secondary data.
4. Define an interval scale with an example.
5. Three samples of sizes 45, 40 and 65 having means 2, 2.5 and 2 respectively were combined. Find the mean of the combined group.
6. Calculate standard deviation of 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.
7. Give the formula for Karl Pearson's coefficient of skewness.
8. What is a scatter diagram ?
9. What is time series?
10. What are the merits and demerits of semi average method?
11. What are the normal equations of straight line  $y = ax + b$ .
12. Compare between Laspeyres's and Paasche's Index numbers.

**(Ceiling: 20 Marks)**

**Part B** (Short essay questions - Paragraph)

Answer *all* questions. Each question carries 5 marks.

13. Calculate mean deviation from mean and median and the corresponding relative measures of 20, 23, 30, 32, 46, 51, 56, 57, 57, 78.
14. Establish the relationship between raw moments and central moments.
15. Derive the expression for angle between two regression lines.

16. Fit a straight line  $y=a+bx$  to the following data.

x	1	2	3	4	6	8
y	2.4	3	3.6	4	5	6

17. Fit a curve of the form  $y = ax^b$  to the following data.

x	1	2	3	4	5	6
y	2.98	4.26	5.21	6.10	6.80	7.50

18. What are the advantages and disadvantages of the moving average method?

19. What do you understand by price relatives and discuss the methods of constructing index numbers based on them.

**(Ceiling: 30 Marks)**

**Part C (Essay questions)**

Answer any *one* question. The question carries 10 marks.

20. From the following data find the rank correlation coefficient

X	48	33	40	9	16	16	65	24	16	57
Y	13	13	24	6	15	4	20	9	6	19

21. What are the problems in the construction of Index Numbers?

**(1 × 10 = 10 Marks)**

\*\*\*\*\*