TB221420V **Reg. No :.....**

Name :.....

B. Sc. DEGREE (C.B.C.S.) EXAMINATION, NOVEMBER 2022

(2022 Admissions (regular) 2021 Admissions (Improvement / Supplementary), 2020, 2019, 2018, Admissions Supplementary)

SEMESTER I - CORE COURSE 1 (STATISTICS)

(For COMPUTER APPLICATIONS)

ST1B01B18 - DESCRIPTIVE STATISTICS

Time : 3 Hours **Maximum Marks : 80**

Part A

I. Answer any Ten questions. Each question carries 2 marks **(10x2=20)**

1. Explain tabulation? Give its advantages.
2. What are the advantages of Primary data?
3. Distinguish between probability sampling and non-probability sampling.
4. The mean mark of 300 students in an exam is 45. The mean mark of the top 100 students is 70 and the mean mark of last 100 students is 20. Fnd the mean mark of the remaining 100 students
5. Explain the method of finding mode of a distribution using graphs
6. Define quartile deviation and coefficient of variation
7. Define Geometric mean.
8. Explain Kurtosis. Give any one measure of Kurtosis.
9. What is Sheppard's correction? What will be the correction for first four central moments?
10. Examine whether Laspeyer's index number satisfies factor reversal test.
11. What is the need of weights in Index numbers?
12. Find simple Arithmetic mean Index number for the following data

Commodities	Price in 2001	Price in 2012
A	70	95
B	40	70
C	120	180
D	30	45

Part B

II. Answer any Six questions. Each question carries 5 marks **(6x5=30)**

13. Explain the different parts of a Statistical table.
14. Briefly explain cumulative frequency tables.
15. The mean salary paid to all employees of a company was Rs. 5000. The mean salary paid to male and female employees were Rs. 5200 and Rs. 4200 respectively. Find the percentage of males and females in the company.
16. The mean and standard deviation of a set of 100 observations were found to be 35 and 4 respectively. If the observations 39, 32, 34 are omitted from the given 100 observations find the mean and standard deviation of the remaining 97 observations.
17. Find mode graphically from the following data

class interval	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
frequency	8	7	15	18	22	14	10	6

18. Explain the term 'kurtosis'. Discuss the the different types of kurtosis

19. Find β_1 from the following data

class interval	0-3	3-6	6-9	9-12	12-15	15-18
frequency	2	4	26	47	15	6

20. Write the relation between raw moments about a and the central moments
21. Explain Laspeyre's index number.

Part C

III. Answer any Two questions. Each question carries 15 marks **(2x15=30)**

22. Explain the construction of (a) histogram (b) frequency polygon and (c) frequency curve with the help of an example.
23. (a) Find the median and upper and lower quartiles for the following distribution.

mark	0-4	4-8	8-12	12-16	16-18	18-20	20-25	above 25
frequency	10	12	18	7	5	8	4	6

(b) Calculate the Quartile Deviation and Coefficient of Quartile Deviation for the above data

24. Explain Kurtosis. Find β_2 and comment on the kurtosis of the following distribution

variable	0-5	5-10	10-15	15-20	20-25	25-30	30-35
frequency	3	5	9	21	15	10	7

25. Given the following data of prices and quantities of three representative consumer goods for the base year and current year, calculate
(1) Laspeyre's index number
(2) Paasche's index number
(3) Fisher's index number.

Commodity	Base Year		Current Year	
	q_0	P_0	q_k	P_k
1	6	40	7	30
2	4	45	5	50
3	0.5	90	1.5	40