TB251933K

Reg. No :.....

Name :.....

BACHELOR'S DEGREE EXAMINATION, OCTOBER 2025

2025 ADMISSIONS REGULAR

SEMESTER I - MINOR - C (STATISTICS)

ST1DSCB101B24 - Basic Statistics

Time : 1.5 Hours | Maximum Marks : 50

Part A

Answer all questions. Each question carries 1 mark. (1x10=10)

1. Give four examples of qualitative data. [CO1,Understand]
2. Explain the term 'population' as used in statistics with a real life example. [CO1,Apply]
3. Define sample. [CO1,Remember]
4. Explain the uses of a bar diagram. [CO2,Apply]
5. Explain the range of quartiles, deciles percentiles? [CO3,Understand]
6. Describe the primary advantage of using mode? [CO3,Understand]
7. Interpret the median for the following observations. 18, 20, 16, 25, 14, 19, 23, 18, 26, 24, 28, 26, 23, 28, 27. [CO3,Understand]
8. Why is standard deviation preferred over range? [CO4,Analyse]
9. Write one use of mean deviation in real-life data analysis. [CO4,Remember]
10. What is the significance of standard deviation? [CO4,Remember]

Part B

Answer any 2 questions from the bunch of CO1. Each question carries 5 mark. (5x2=10)

11. Explain cluster sampling with a suitable example. [CO1,Understand]
12. Describe the process of stratified sampling with an example. [CO1,Understand]
13. Explain quantitative data with suitable examples. [CO1,Apply]

Part B

Answer any 2 questions from the bunch of CO3. Each question carries 5 mark. (5x2=10)

14. Explain with examples how each measure of central tendency may lead to different interpretations. [CO3,Apply]
15. Determine the mean for the following data.

Class Interval	0 - 2	2-3	3-4	4 - 5	5 - 6	6 - 7	7 -8
Frequency	8	9	13	15	5	20	15

[CO3,Apply]

16. Determine the harmonic mean for the monthly expenditure (in Rs) for 10 students, considering the following values: 125, 130, 75, 10, 45, 5, 0.5, 0.4, 500, and 150 [CO3,Apply]

Part B

Answer any 2 questions from the bunch of CO4. Each question carries 5 mark. (5x2=10)

17. What are the properties of a good measure of dispersion? [CO4,Remember]
18. Explain how standard deviation helps in measuring the consistency of data? [CO4,Understand]
19. The lifetimes (in hours) of 7 bulbs are:
    400, 450, 500, 550, 600, 650, 700
    Calculate the Standard Deviation. [CO4,Apply]

Part C

Answer any 1 question from the bunch of CO2. Each question carries 10 mark. **(10x1=10)**

20. A) Construct a pie diagram for the survey conducted among 100 students to find their favorite subjects. The results are shown below:

Subject	Number of Students
Mathematics	25
Science	20
English	15
History	10
Geography	15
Computer Science	15

B) If 5 more students change their favorite subject to History, how will the pie diagram change? [CO2,Apply]

21. Construct a histogram to represent the marks obtained by the students.

Marks Range	Number of Students
0 - 10	2
10 - 20	5
20 - 30	8
30 - 40	10
40 - 50	7
50 - 60	5
60 - 70	3

1. Which class interval has the highest frequency?
2. How many students scored less than 30 marks?
3. What is the total number of students who scored between 30 and 60 marks?
4. Identify the class interval with the lowest frequency.
5. Based on the histogram, what can you say about the overall performance of the class?

[CO2,Apply]