

QP CODE: D1BST2503

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Reg. No :

Name :

FIRST SEMESTER FYUGP (Regular) EXAMINATION, NOVEMBER 2025

Discipline Specific Core (DSC) Courses - Minor

STA1MN107 : Basic Statistics

(Credits: 4)

Time: 2 Hours

Maximum Marks: 70

Section A

Answer the following questions. Each carries 3 marks (Ceiling: 24 marks)

- | | | | |
|-----|--|-----|-----|
| 1. | If 7 is the random start and 10 is the sampling ratio, then give the systematic sample of size 5. | BL3 | CO2 |
| 2. | What is meant by graphical representation of data? Name any three graphical methods for the presentation of frequency distributions. | BL2 | CO3 |
| 3. | Give the equations to calculate interquartile range and semi interquartile range. | BL2 | CO4 |
| 4. | Define trial and outcome. | BL2 | CO4 |
| 5. | What is secondary data? Give an example. | BL2 | CO1 |
| 6. | What is meant by simple random sampling? | BL2 | CO1 |
| 7. | What are the diagrammatic representation of categorical data? | BL2 | CO3 |
| 8. | Evaluate the sentence: "Mode is always unique". | BL2 | CO4 |
| 9. | State multiplication theorem for two events. | BL2 | CO5 |
| 10. | Find AM of the marks obtained in Statistics by 10 students : 10,15, 5,13, 6,14, 8, 9, 10, 15. | BL3 | CO4 |

Section B

Answer the following questions. Each carries 6 marks (Ceiling: 36 Marks)

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|-----|--|-----|-----|
| 11. | Briefly explain sampling errors. | BL2 | CO2 |
| 12. | An HR department collected data on the average time (in minutes) taken by 20 employees to complete a specific task is given as follows:
<div style="border: 1px solid black; padding: 5px; margin: 5px 0;">15, 25, 29, 33, 44, 26, 31, 35, 32, 47, 28, 32, 23, 47, 38, 41, 19, 21, 31, 18.</div> Form a less than cumulative frequency table. | BL3 | CO3 |

(PTO)

13. Calculate SD for the following data

BL3 CO4

1.

x_i	10	15	20	25	30
f_i	3	10	8	2	4

2.

x_i	5	6	7	8	9
f_i	3	2	5	2	6

14. In a market survey, it was found that 18% of customers prefer product A, 38% prefer product B and 14% prefer both product A and B. Find the probability that a customer prefers either product A or product B.

BL3 CO5

15. What is the probability that a leap year selected at random will have 53 sundays?

BL3 CO5

16. Discuss about complete enumeration and a situation where it is the only possible method of data collection.

BL2 CO1

17. Distinguish between class limits and class boundaries.

BL2 CO3

18.
1. Describe the method to find median for ungrouped data.
2. Find the median for the following data.

BL3 CO4

x_i	12	14	15	16	17	18	19	20
f_i	3	5	6	4	12	5	8	8

Section C

Answer any one question. Each carries 10 marks (1 x 10 = 10 Marks)

19. Briefly explain, measures of dispersion and desirable properties of an ideal measure of dispersion.

BL2 CO4

Briefly explain, range of a distribution, its merits and demerits.

20. Explain stratified sampling and its methods of selection.

BL2 CO1

CO : Course Outcome

BL : Bloom's Taxonomy Levels (1 – Remember, 2 – Understand, 3 – Apply, 4 – Analyse, 5 – Evaluate, 6 – Create)