

Question Paper

Exam Date & Time: 19-Dec-2022 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SIXTH SEMESTER B.Sc. B.Sc. MLT/ B.Sc. MRT/ B.Sc. MIT / B.Sc. RRT & DT/EIGHTH SEMESTER BPT DEGREE
EXAMINATION - DECEMBER 2022

SUBJECT: STAT 402 - BIOSTATISTICS & RESEARCH METHODOLOGY /BASIC BIOSTATISTICS & RESEARCH
METHODOLOGY/BIOSTATISTICS
(2016 SCHEME/2016 RV SCHEME/2017 SCHEME)

BASIC BIOSTATISTICS and RESEARCH METHODOLOGY [STAT 402]

Marks: 50

Duration: 120 mins.

1. Briefly explain the following:

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| 1A) | Relative frequency | (2) |
| 1B) | Prevalence | (2) |
| 1C) | General Fertility Rate (GFR) | (2) |
| 1D) | Gross Reproduction Rate (GRR) | (2) |
| 1E) | Crude Death Rate (CDR) | (2) |

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|----|--|-----|
| 2) | Explain the characteristics of the statistical data. | (5) |
| 3) | Explain different types of variables with examples. | (5) |

4. The following data provides haemoglobin level (gm/dL) of 12 subjects.

12 15 13 12 17 10 11 14 13 17 13 15

Calculate the values of:

- | | | |
|-----|--------------------------|-----|
| 4A) | Sample mean | (3) |
| 4B) | Mode | (1) |
| 4C) | Range | (1) |
| 4D) | Coefficient of variation | (5) |

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|----|--|-----|
| 5) | The daily numbers of animals treated at a certain veterinarian clinic over a 19-day period are as follows: | (5) |
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22 17 19 31 28 29 21 33 36 24 15 28 25 28 22 27 33 19 25

Summarize the data set using median and inter quartile range.

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| 6) | Enumerate Any FIVE differences between probability (random) sampling and non-probability sampling technique. | (5) |
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- 7) Slope gives the change in independent variable for one unit increase in the dependent variable (2)
i) True
ii) False
Justify your answer with an explanation.
(1+1 = 2 marks)
- 8) Briefly explain the steps involved in a research process. (8)

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