

QP CODE: 105388

Reg. No:.....

**First Year Master of Optometry Degree Regular/Supplementary
Examinations January 2022**

Research Methodology and Biostatistics

Time: 3 Hours

Total Marks: 80

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

Essay

(20)

1. Explain the steps involved in formulating a research proposal. Give an example of a research question and write a sample research proposal by following the steps involved.

Short Essays

(6x10=60)

2. In a study of SARS COVID – 19, data was collected on the number of days, the subjects were on the ventilator. The data is as follows:

10, 5, 7, 9, 20, 38, 22, 14, 27, 16, 31, 6, 11, 8, 9

Explain and calculate Mean, Median, Mode, interquartile range.

3. Define skewness and kurtosis. Explain different methods to measure skewness.
4. • Define dependent and independent variables. Explain each with an example.
 - What is the difference between a standard deviation and standard error. Explain with the help of the formulae.
5. What is a case control study. Explain with an example.
6. Explain the Chi-square test and write its application.
7. If you know the standard deviation, how do you calculate the variance. Explain with an example.
