## Total number of printed pages-4

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## 2018

# RESEARCH METHODOLOGY AND BIOSTATISTICS

Full Marks: 80

Time: Three hours

# The figures in the margin indicate full marks for the questions.

1. Short Answer Type Questions:

 $2 \times 10 = 20$ 

- (a) Define primary data and secondary data with examples.
- (b) Define the terms: Random experiment, Exhaustive cases.
- (c) Write two criteria of a good sample.
- (d) What do you mean by stratified random sampling?
- (e) Write *two* advantages of non-parametric method.

Contd.

- (f) Write two criteria of a good research.
- (g) Assumption of ANOVA.
- (h) Write about multi-stage sampling.
- (i) Define: Population, Sample.
- Give the classical definition of probability.
- 2. Short Essay Type Questions : (any eight) 8×5=40
  - (i) What are the methods of determining test reliability?
  - (ii) Write the advantages and disadvantages of primary data over secondary data.
  - (iii) Write the method of collection of secondary data.
  - (iv) What is Research? What are the objectives of research?
  - (v) Write the merits and demerits of diagrammatic representation.
  - (vi) How would you make a comparison of mean, median and mode?

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- (vii) What is the importance of the study of statistics?
- (viii) Explain the test of independence of attributes.
- (ix) Write the applications of biostatistics.
- (x) What is ANOVA? What are the basic principles underlying ANOVA?
- 3. Essay Type Questions : (any two)  $10 \times 2 = 20$ 
  - (i) What do you mean by 'Sample Design'? What points should be taken into consideration by a researcher in developing a sample design for the research project?

#### OR

Make a comparative study of the Mean, Median and Mode.

(ii) What is Hypothesis? What are the characteristics of a hypothesis? How would you measure the power of a hypothesis test?

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What are the objectives of a research? Write the importance of a good research.

(iii) What is sampling? What point should be taken into consideration by a researcher in developing a sample design for the research project?

## OR

What is binomial distribution? Write the characteristics of the distribution.