

B.P.

Total number of printed pages-4

34(2) RMBI 2-5

**2015**

**RESEARCH METHODOLOGY AND  
BIOSTATISTICS**

Full Marks : 80

Time : Three hours

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

1. Answer the following questions : **(any two)**  
2×10=20

(i) What are the essentials of an ideal sample? Explain various methods of sampling.

**OR**

What is Analysis of Variance (ANOVA)?  
What are basic principles underlying ANOVA?

(ii) "Research should not be viewed only as scientific research which is empirical, inductive and exact." Discuss the statement in the light of the special characteristics of research.

*Contd.*

**OR**

“Questionnaire provides the most speedy and simple technique of gathering data about groups of individuals scattered in a wide and extended field.” Point out the importance of questionnaire.

- (iii) What is tests of significance? Class A was taught in an intensive coaching facility whereas Class B in a normal class teaching. At the end of a session Class A and B averaged 48 and 43 with SD 6 and 7.40 respectively. Test whether intensive coaching has fetched gain in mean score to Class A. Class A constitutes 60 and Class B 80 students.

**OR**

What do you mean by central tendency of scores? Make a comparative study of mean, median and mode.

2. Answer the following questions : **(any eight)**

8×5=40

- (i) What is quantitative and qualitative approach in research?  
(ii) What is Type I error and Type II error?

- (iii) What is Null hypothesis and Alternative hypothesis? Give illustrations of each.  
(iv) How would you make a statement of research problem as a researcher?  
(v) Write a short note on Rating scale.  
(vi) What is the importance of the study of statistics?  
(vii) Draw a frequency polygon for the following table of distribution (use Graph Paper)

<b>Class Intervals</b>	<b>Frequency</b>
160-162	10
162-164	15
164-166	17
166-168	19
168-170	20
170-172	26
172-174	29
174-176	30
176-178	22
178-180	12
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	N = 200

- (viii) What is one-tailed and two-tailed test ?
- (ix) What is students 't' distribution ?
- (x) Write the features of a Good Sample Design.

3. Answer in short : 10×2=20

- (i) What is variable ?
- (ii) What is 'Z' test ?
- (iii) What is Degrees of Freedom ?
- (iv) What is Action Research ?
- (v) What is Sampling Variation ?
- (vi) What is Descriptive Statistics ?
- (vii) What do you mean by probability ?
- (viii) What is Parametric and Non-Parametric tests ?
- (ix) What is Ratio Scale ?
- (x) What is 'Tabulation' in processing operations ?