



BBA-BP801T

Seat No. _____

M. P. M. (Sem. VIII) (CBCS) (W.E.F. 2017) Examination

July – 2021

Biostatistics and Research Methodology

Time : 3 Hours]

[Total Marks : 75

- Instructions :** (1) Answer the following questions.
(2) Figures to the right indicate marks.
(3) Draw neat & clean diagrams as required.

1 Answer the following questions : **10×2=20**

- (a) Define Measures of dispersion with suitable example.
- (b) Define probability.
- (c) What is standard error of regression?
- (d) Define Standard error of mean (SEM).
- (e) Explain Correlation.
- (f) Define and explain Null hypothesis.
- (g) Write in brief about Error-II type.
- (h) Explain the importance of Factorial Design.
- (i) Differentiate Non Parametric tests from Parametric tests.
- (j) What is Multiple regression?

2 Answer any **two** out of the following : **2×10=20**

- (a) Explain Blocking and confounding system for Two-level factorials.
- (b) Define and explain Response Surface methodology. Explain in detail about Central composite design.
- (c) Discuss in detail about Binomial and Normal distribution.

3 Answer any 7 out of the following :

7×5=35

- (a) Explain the Wilcoxon Rank Sum Test with example.
- (b) Discuss on Karl Pearson's coefficient of correlation with suitable example.
- (c) Write a note on One way ANOVA.
- (d) Describe the response surface and Counter Plot graph.
- (e) Explain the Least Significance difference.
- (f) Enlist various Parametric tests and write a note on pooled t-test.
- (g) Draw simple Histogram and Pie Chart. Also write applications of same.
- (h) Explain the need for design of Experiments.
- (i) Calculate Mean, Median and Mode of hardness of conventional tables.

(Hardness, in kg : 4, 3, 2, 4, 5, 3, 4, 4, 2, 3)
