

**MRM 301T. RESEARCH METHODOLOGY & BIostatISTICS****Semester 3rd, Syll-Dec-2020****(Common for All Specializations)****Section A**

1. (a) What is Sample size? 2
- (b) What do you understand by Randomization? 2
- (c) What is Coefficient of correlation? 2
- (d) What are the characteristics of research? 2
- (e) Differentiate between descriptive research and exploratory research. 2
- (f) Define Level of Significance. 2
- (g) What is the importance of communication in medical research? 2
- (h) Explain fatality. 2
- (i) Describe P value. 2
- (j) Discuss critical region and acceptance region. 2

**Section B**

2. Write a descriptive note on ANOVA and *post-hoc* analysis tests. 10
3. (a) What are the conflicts between autonomy and beneficence/non-maleficence? 5
- (b) Give composition and functions of IAEC. 5
4. Describe in detail principles of Declaration of Helsinki. 10

**Section C**

5. Explain in detail CPCSEA guidelines with respect to quarantine, location of animal facilities and transport of laboratory animals. 5
6. Define Study design. What are the components of a case study design? 5
7. Two different methods were used to determine the concentration of prothrombin in plasma. Both determinations were made on the same subject, using eight subjects in all. On the basis of following data, where prothrombin is expressed in milligrams/100 ml, determine whether a significant difference exists between the two methods. 5

Subject	Method I	Method II
1	17	18
2	17	17
3	18	20
4	21	24
5	22	23
6	17	15
7	23	25
8	23	22

8. What are the criticisms of orthodox medical ethics? 5
9. Discuss various anaesthetics and euthanasia used in animal experiments. 5
10. Write a detailed note on Chi Square test. 5
11. What are Cultural concerns in medical research? 5
12. Explain Blinding techniques. 5
13. Write a note on informed consent. 5