Roll No.

Total No. of Pages : 01

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## M.Sc. MLS (Biochemistry) (Sem.-3) STATISTICS AND CLINICAL BIOCHEMISTRY LABORATORY MANAGEMENT

Subject Code : MMLT-303-18

M.Code: 76878

## Date of Examination: 16-12-2022

Time: 3 Hrs.

Max. Marks : 50

## **INSTRUCTIONS TO CANDIDATES :**

- 1. Attempt any FIVE questions out of EIGHT question.
- 2. Each question carries TEN marks.
- 1. Calculate mean, median and mode of the following data: 5,9,7,8,5,7,8,3,5,3,8,5,6. Define Chi-square test.
- 2. What do you mean by ANOVA, write its significance and assumptions with example?
- 3. To carry out one factor analysis of variance of the given observations of three different groups of student performance in grades. Find out the mean difference between the groups and state the hypothesis, **[alpha level: 0.05 = F = 5.41].**

Group A	Group B	Group C
3	3	4
4	4	2
5	3	4

4. A. Define students- T test. Write the significance and assumptions of both tests with example.

B. Scientists want to evaluate a new molecule against IQ score. In population average mean IQ score ( $\mu$ )= 200, Sample size they took (n)= 65, Mean score of sample size (x)= 130, Standard Deviation (S)= 12 with an Alpha ( $\alpha$ )=0.05. Calculate one sample statistics for the given observations.

- 5. Explain hypothesis. Write a note on hypothesis testing. Give one examples. Define errors. Differentiate between type-I and type-II errors.
- 6. Write a detail note on correlation and regression. Write their uses in research.
- 7. Define sample and sampling. Write the classification of sampling techniques. Discuss in detail about probability sampling.
- 8. Write a detailed note on classification and presentation of data-graphs with suitable examples.

## NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.