

B.Sc 3rd Semester (General/Hons) Examination, 2020 (CBCS)

Subject: Statistics

Paper: CC-3 (General)/GE-3 (Hons)

(Basics of Statistical Inference)

Time: 2 Hours

Full Marks: 40

Answer any **eight** questions:

8X5=40

1. Distinguish between Parameter and Statistic with examples.
2. What is Minimum variance unbiased estimator? Also define BLUE.
3. Analyse two-way classified data with one observation per cell for fixed-effects models.
4. Distinguish between any two methods of point estimation.
5. Briefly discuss the test of independence of two attributes.
6. What is 'Sign Test'? Give an example of it.
7. Describe the ANOVA of one- way classified data considering a fixed-effects model.
8. If the variances of independent and unbiased estimators T_1, T_2, T_3 of θ are in the ratio 2:3:5, which of the following estimators of θ would you prefer most?
 $(2T_1+T_2+T_3)/4, (T_1+T_2+2T_3)/4, (T_1+2T_2+T_3)/4$.
9. What are the necessary steps in testing of hypotheses?
10. Shortly explain terms 'Critical region' and 'Test Statistic' with proper examples.