

THREE YEAR B.A./B.Sc DEGREE EXAMINATION
STATISTICS(WM)
(W.E.F 2020-21 ADMITTED BATCH)
SEMESTER – III
PAPER 3: STATISTICAL INFERENCE

Time: 3 Hours

Max. Marks : 75

SECTION – A

Answer any FIVE Questions :-

5 X 5 = 25 M

1. Define the concepts (a)Population (b)Sample (c)Paramater (d)Statistic.
2. Define (a)Convergence in Probability (b) Convergence in Distribution
3. State Neyman-factorization theorem
4. Discuss the method of Moments in estimating the parameters
5. Explain Type-I and Type-II errors..
6. Explain one tail and two tail tests
7. Explain Large sample test for sample mean.
8. Explain F test for equality of variances
9. Define Nominal and Ordinal Scales of Measurement with examples.
10. Explain two sample Sign test

SECTION – B

Answer any FIVE questions :-

5 X 10 = 50M

11. Define Student's t-distribution, Mention the properties
12. Define F-distribution , Mention the properties and applications
13. Discuss the properties of a Good estimator.
14. Explain MLE method of estimation and mention the properties.
15. State and Prove Neyman Pearson Lemma
16. Explain the concepts (a) Null hypothesis (b)Alternative hypothesis (c)Critical region (d)Level of significance (e)power of the test
17. Explain Large samle test for single proportion.
Given that on average 3% of insured people die within a year, and 75 of 1000 such persons died within a particular year. Can this group be regarded as a representative of the sample?
18. Explain (a)Paired t-test (b) Chi-square test for goodness of fit.
19. Explain Non-parametric tests, their advantages and disadvantages.
20. Explain Median test for two independent samples.