

Total Duration : 2 Hrs. 30 Mins.

Total Marks : 60

1. Discuss the concept of minimum variance unbiased estimators (MVUE).
2. Explain the method of moments and its application.
3. Prepare a note on the concept of confidence intervals for the parameters of a normal distribution.
4. Describe the minimax estimator in Bayesian statistics.
5. State and Prove Lehmann-Scheffe theorem.
6. Relate and explain type I and type II censoring.
7. Illustrate the difference between small-sample and large-sample interval estimation.
8. Infer about the Bayes' rule? Explain with an example.

9. Show and contrast the Cramer-Rao lower bound with the Chapman-Robbins bound, with appropriate examples.
10. State and Prove the Rao-Blackwell theorem.
11. Compare the method of maximum likelihood estimation and the method of moments.
12. Infer fiducial intervals and compare them with confidence intervals.
13. Examine the concept of a conjugate prior and its application in Bayesian estimation.