Class: Ph.D. Course Work [Credit – 04]

Subject: Course- 1: Research Methodology (700001)

Assignment No. 2

Q. 1 Explain the meaning and significance of the concept of "Standard Error' in sampling Analysis.

Q. 2 What is statistical interference? Explain the types of statistical inferences.

Q. 3 Explain how you will use 'chi' test used for interpreting results of your research work.

Q. 4 Write short notes on:
   i)   Response curve methods,
   ii) Uncertainty analysis,
   iii) Parameter estimation,
   iv) Principal component analysis

Q. 5 What are different types of mathematical models in an engineering study? Analyze your own research problem from view point of model development.
   (Any case study of your own choice in any field will be acceptable).

Q. 6 Write steady and unsteady state mathematical model for any research problem of your choice. Discuss the mathematical strategy / steps to solve it and usefulness of the results obtained from simulations in analyzing your research problem
   (Any case study of your own choice in any field will be acceptable)

Q. 7 Explain the concept of a model & the utility of modeling research? What type of model you can think of in the context of your research proposal?

Q. 8 Explain mathematical models as a conceptual model as a system. Explain the modeling elements & Its interrelationship.