

**B.Sc. (Honours) Examination, 2018**  
**Semester-IV**  
**Statistics (Allied)**  
**Course : BSA-41 (New)**  
**(Statistical Quality Control and Design of Experiment)**

**Time : 3 Hours**

**Full Marks : 40**

Questions are of value as indicated in the margin

Answer **any four** questions

1. Discuss, in detail, the analysis two-way classified data with one observation in each cell. 10
  2. In the context of designing an experiment, describe the terms (1) experimental unit, (2) treatment, and (3) experimental error. Discuss the basic principles of design of experiment. 10
  3. Discuss, in detail, the analysis of Completely Randomized Design. 10
  4. (a) Explain the basis of Shewart's control chart technique. 6  
(b) Discuss the notion of rational subgroups. 4
  5. (a) Describe, in detail, the construction of control chart for mean. 5  
(b) Describe, in detail, the construction of control chart for range. 5
  6. (a) Describe the construction of control chart for number of defectives. 5  
(b) Describe the construction of control chart for number of defects. 5
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