

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI • EXAMINATION – SUMMER 2013****Subject Code: 162501****Date: 24-05-2013****Subject Name: Statistical Methods and Quality Control****Time: 10.30 am - 01.00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain different types of data collection methods with suitable example **07**
(b) What do you mean by 'Central Tendencies'? Explain different types of 'mean' along with their use. **07**
- Q.2** (a) Describe conditional probability with suitable example. **07**
(b) Discuss the properties of Binomial and Poisson's distribution **07**
- OR**
- (b) Describe 'normal distribution curve' and its importance in detail **07**
- Q.3** (a) Compare raw moment and central moment and derive relationship between them **07**
(b) What is exponential distribution? Explain its properties in detail. **07**
- OR**
- Q.3** (a) What are the ways of representing data? Explain them with their suitable applications. **07**
(b) What is auto-correlation? Explain auto-correlation in detail. **07**
- Q.4** (a) Describe types of errors in testing of hypothesis in detail **07**
(b) What do you mean by ANOVA? explain with suitable example **07**
- OR**
- Q.4** (a) Describe process of testing hypothesis when mean of two samples are known. **07**
(b) What is the use of student t-test? Give an example of t-test **07**
- Q.5** (a) Draw OC curve and explain its properties. **07**
(b) Explain different types of sampling techniques in brief. **07**
- OR**
- Q.5** (a) What is the use of X-R chart? Explain with an example **07**
(b) Describe control charts for attribute test. **07**
