

Tutorial Examination

**Department of Computer Science and Engineering, and Department of Information
& Communication Engineering**

Faculty of Engineering, RU, Course-STAT 2111

[All questions are equal number. Answer any three questions]

1. (a) What do you mean random sample?
(b) Distinguish between parameter and statistic
2. (a) What do you mean by statistical test?
(b) Distinguish between type I error and type II error
3. (a) What do you mean by power of a test?
(b) Distinguish between confidence interval and level of significance
4. (a) What is critical region?
(b) What do you mean by degrees of freedoms?

Second Tutorial Examination
Department of CSE and ICE, RU
2nd year (odd) Semester, 2017

13/11/17
11/2
1300/104
2
973

1. a) When do you use one way analysis of variance (ANOVA)?
b) Problem: A company is to choose from two brands of tires, A and B, for their vehicles. An experiment is conducted in which 10 tires of brand A and 12 tires of brand B are used. The variables are the number of miles traversed by the tires. The experiment results are as follows:
Brand A, $\bar{x}_A = 20,000$ miles, $s_A = 1,800$ miles
Brand B, $\bar{x}_B = 24,000$ miles, $s_B = 2,600$ miles
Which of these brands do you consider superior (equality of variances is not assumed)? Test at 5% level of significance. [$t_{0.05, df. 19} = \pm 2.093$].