

Reg. No.....

Name.....

**M. A. DEGREE END SEMESTER EXAMINATION APRIL 2017**  
**SEMESTER - 2: ECONOMICS**  
**COURSE: 15P2ECOT10 - QUANTITATIVE METHODS FOR ECONOMIC**  
**ANALYSIS - II**  
*(For Supplementary - 2015 Admission)*

Time: Three Hours

Max. Marks:75

**PART A**

**(Each question carries 2 marks)**

1. Define mathematical expectation of a continuous random variable.
2. Define lognormal distribution.
3. What do you mean by standard error?
4. What is central limit theorem?
5. What are the properties of a good estimate? (2 x 5 = 10)

**PART B**

**(Each question carries 2 marks. Maximum marks from this part is 35)**

6. Define moments of a random variable.
7. Mr. Vimal get Rs 10 if he occur identical numbers on two dice when thrown, otherwise loose Rs 2. What is his expected gain in a single throw.
8. Define t-distribution and give an example for t-statistic.
9. If X follows a binomial distribution mean 5 and variance 2.5, what is  $\Pr(X = 1)$
10. Three coins are tossed, Y represents the number of heads occurred. Determine the probability distribution of Y.
11. Describe type I error and type II error with the help of examples
12. If X follows  $N(10, 2.8)$ , what is the probability that X is greater than 16
13. Describe the procedure of testing the mean of the population based on large sample.
14. When studied 150 patients, only 90 are survived, find 95% confidence interval for the proportion of survivals in the disease.
15. Describe test of goodness of fit.

**PART B**

**(Each question carries 15 marks. Maximum marks from this part is 30)**

16. In an examination 33% students are scored below 40 marks and 20% of them are scored above 70 marks. Assume that the marks follow a normal distribution. Find the mean and standard deviation
17. Scores of 10 individuals in an evaluation before and after a training programme is as below
- Before : 41 68 69 90 75 37 40 56 81 68
- After : 39 70 64 90 78 43 42 51 84 76
- Test whether the training programme is effective.
18. Explain the method of testing the equality of variances of two populations.

\*\*\*\*\*