STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 86
(For candidates admitted from the academic year 2015-16 and thereafter)
SUBJECT CODE: 15EC/PC/RM24

M. A. DEGREE EXAMINATION, APRIL 2018
BRANCH III – ECONOMICS
SECOND SEMESTER

COURSE : MAJOR – CORE
PAPER : RESEARCH METHODS AND ANALYSIS–II (THEORY)
TIME : 2 HOURS **MAX. MARKS: 60**

ANSWER ANY SIX QUESTIONS. EACH ANSWER NOT TO EXCEED 300 WORDS.
(6 X 10 = 60)

1. Differentiate with appropriate examples between descriptive statistics and inferential statistics. Discuss the role of statistics in scientific inquiry in social sciences.

2. What are the various uses of dummy variable in a regression analysis?

3. Explain with suitable economic illustrations the following models: Double Log, Semi-Log, Reciprocal and Polynomial regression models.

4. **(i)** Differentiate between parametric and non-parametric Tests.
(ii) A principal wonders if her 5th standard students score differently on a maths test than 5th standard students in the U.S. at large. From her school she collects at random sample score of 20 students of 5^{th} standard. She knows that 5^{th} standard students in the U.S. at large have a mean score of 88 on the test. Given below are the scores of her sample of 20 5^{th} standard students. Test the hypothesis made by the principal of the school at 5 % level of significance using appropriate test. (Given critical value $t_{0.05} = 2.086$)

75	92	85	66	93	88	75	90	90	92
84	88	67	98	99	100	79	95	88	89

5. (a) The life time of electrical bulbs for a random sample of 10 large consignments gave the following data. Test whether the sample could have come from a population with mean life of 4000 hours.
Life (in 000' hrs):

4.2	4.6	3.9	4.1	5.2	3.8	3.9	4.3	5.6	4.4

(b) The mean weight of 500 male students in a certain college is 151 lbs and the standard deviation is 15 lbs. Assuming the weights are normally distributed, find how many students weigh (a) Between 120 and 155 lbs (b) more than 185 lbs. [Area 2.1 = 0.4821, 0.3 = 0.1179, 2.3 = 0.4893]

6. Discuss the various types of t- test illustrating the situation under which they can be used.
7. Discuss the components of time series data with appropriate examples.
8. State and compare the characteristics of Normal and Poisson distribution.

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