

TB156295A

Reg. No.....

Name.....

**B. A. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH 2018**

**(2015 Admission Regular)**

**SEMESTER VI – CORE ( ECONOMICS )**

**EC6B11B – QUANTITATIVE ECONOMICS**

**Time: Three Hours**

**Maximum Marks: 80**

**Part A**

**I. Answer all the following questions. Each question carries 1 mark.**

1. What is Probability?
2. Define random experiment.
3. Differentiate between statistic and parameter.
4. What is the difference between estimate and estimator?
5. Differentiate between point estimation and interval estimation.
6. Define time series.

**(6X1=6)**

**Part B**

**II. Answer any seven of the following. Each question carries 2 marks.**

7. State the Central limit theorem.
8. Define random variable. What do you mean by distribution of random variable?
9. State the addition and multiplication theorems of probability.
10. What are the properties of estimators?
11. Distinguish between estimate and estimator.
12. Differentiate between point estimation and interval estimation.
13. Distinguish between parameter and statistics with suitable examples.
14. What are the uses of time series analysis?
15. What are seasonal variations? What are the methods used for measuring seasonal variations?
16. What do you mean by deseasonalisation of data?

**(7X2=14)**

**Part C**

**III. Answer any five of the following. Each question carries 6. marks**

17. A speaks truth in 70% cases and B in 85% cases. In what percentage of cases are they likely to contradict each other in stating the same fact.
18. Eight unbiased coins were tossed simultaneously. Find the probability of getting (i) exactly 4 heads (ii) no heads at all (iii) 6 or more heads (iv) utmost 2 heads (v) number of heads ranging from 3 to 5.
19. The height of the school children of one institution is normally distributed with mean of 54 inches and SD of 12 inches. What percentage of students has height between 46 and 56 inches.
20. What is point estimation? Explain the various methods used.
21. State the merits and demerits of point and interval estimation.

22. What is time series? Explain the analysis of time series and list out its uses.
23. Explain the components of time series.
24. Explain the methods of measuring trend. **(5X6=30)**

#### **Part D**

#### **IV. Answer any two of the following. Each question carries 15 marks**

25. The scores of students in a test follow normal distribution with mean = 80 and SD= 15. A sample of 1000 students has been drawn from the population. Find (1) probability that a randomly chosen student has score between 85 and 95 (2) appropriate number of students scoring less than 60.
26. 50 children were given special diet for a certain period and control group of 50 other children were given normal diet. Their average gain in weight were found to be 7.2 lbs and 5.7 lbs respectively and the common SD for gain in weight was 2 lbs. Assuming normality of the distributions would you conclude that the special diet really promoted weight?
27. In a certain district A, 450 persons were considered regular consumers of tea out of a sample of 1000 persons. In another district B, 400 were regular consumers of tea out of a sample of 800 persons. Do these facts reveal any significant difference between the two districts as far as tea drinking habit is concerned?
28. Explain the importance of time series analysis. What are its components? **(2X15=30)**