

S.D.E.
B.B.A. (2006 Course) Sem- III : WINTER - 2018
SUBJECT: BUSINESS STATISTICS - II

Day : Thursday
Date : 06/12/2018

W-2018-4453

Time 02.00 PM TO 05.00 PM
Max. Marks : 80

N.B.:

- 1) Attempt Any **FIVE** Questions from Section – I and Any **TWO** from Section - II
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both sections should be written in the **SEPARATE** Answer Books.
- 4) Use of Non-Programmable **CALCULATOR** is allowed.
- 5) Use of **Statistical Tables** and **Graph Papers** are allowed.

SECTION – I

- Q.1.** What is hypothesis? Explain the procedure of hypothesis testing. (10)
- Q.2.** Out of 715 literates in a particular city of India, number of criminals was 8; (10)
while out of 975 illiterates in the same city, 17 were criminals. Find out
whether illiteracy and criminality are associated or independent by using
proportion method.
- Q.3.** What is Poisson Distribution? Under what condition is it applicable? (10)
- Q.4.** A committee of four has to be formed from among 3 economists, 4 engineers, (10)
2 statisticians and 1 doctor.
- i) What is the probability that each of the four professions is represented on the committee?
 - ii) What is the probability that the committee consists of the doctor and at least one economist?
- Q.5.** What is time series? Explain the components of the time series analysis. (10)
- Q.6.** What is correlation? Explain methods of studying correlation. (10)
- Q.7.** Write Short notes on Any **TWO** of the following: (10)
- a) Coefficient of determination
 - b) Probability theory
 - c) Sampling and Estimation

SECTION - II

- Q.8.** Ten unbiased coins are tossed simultaneously. Find the probability of (15)
obtaining :-
- i) No head
 - ii) At least one head
 - iii) Not more than three heads
- Q.9.** A company has two plants to manufacture scooters. Plant I manufactures (15)
80% of the scooters and plant II manufactures 20%. At plant I, 85 out of 100
scooters are rated standard quality or better. At plant II, only 65 out of 100
scooters are rated standard quality or better.
- i) What is the probability that scooter selected at random came from plant I if it is known that the scooter is of the standard quality?
 - ii) What is the probability that the scooter came from plant II, if it is known that the scooter is of standard quality?
- Q.10.** What is Chi-Square test? Explain its significance in statistical analysis. (15)

* * * *