

B.B.A. SEM – III (2015 CBCS COURSE) : SUMMER - 2018**SUBJECT : BUISNESS STATISTICS – II**Day : **Tuesday**Date : **08/05/2018****S-2018-1604**Time : **02.00 PM TO 05.00 PM**

Max. Marks : 100

N.B.:

- 1) Attempt **ANY FOUR** questions from Section – I and attempt **ANY TWO** questions from Section – II.
- 2) Answers to both the sections should be written in the **SAME** answer book.
- 3) Figures to the right indicate **FULL** marks.

SECTION – I

- Q.1** Find the coefficient of correlation by Karl Pearson's method between X and Y. [15]

x	57	42	40	33	42	45	42	44	40	56	44	43
y	10	60	30	41	29	27	27	19	18	19	31	29

- Q.2** Compute Spearman's rank correlation for the following observations: [15]

Candidate	1	2	3	4	5	6	7	8
Judge x	20	22	28	23	30	30	23	24
Judge y	28	24	24	25	26	27	32	30

- Q.3** On the basis of figures recorded below for 'Supply' and 'Price' for nine years, calculate the regression coefficient and the value of r. [15]

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010
Supply	80	82	86	91	83	85	89	96	93
Price	145	140	130	124	133	127	120	110	116

- Q.4** A bag contains 8 red and 5 white balls. The successive drawing of 3 balls are made such that: [15]

- a) Balls are replaced before the second trial.
 - b) The balls are not replaced before the second trail.
- Find the probability that the first drawing will give 3 white and the second 3 red balls.

- Q.5** The incidence of occupational disease in an industry is such that the workers have a 20% chance of suffering from it. What is the probability that out of six workers 4 or more will suffer from a disease? [15]

- Q.6** Describe any two methods of decision making under uncertainty, pointing out their relative merits and demerits. [15]

- Q.7** Explain any three properties of Normal distribution. [15]

SECTION – II

- Q.8** The following table gives the number of days in a 50 – day period during which automobile accidents occurred in a city. Fit Poisson distribution to the data: [20]

No. of accidents	0	1	2	3	4
No. of days	21	18	07	03	01

- Q.9** a) State and prove the addition and multiplication theorems of probability. [10]

- b) Explain what do you understand by the term probability. Discuss its importance in managerial decision making. [10]

- Q.10** a) Prepare a 2×2 table from the following information. Calculate Yule's coefficient of association and interpret the result. [10]
 $N = 1500$, $(\alpha) = 1117$, $(B) = 360$, $(AB) = 35$.

- b) What is Yule's coefficient of association? State its interpretation. [10]