

S.D.E.

B.B.A. (2006 COURSE) SEM- III : SUMMER - 2018

SUBJECT : BUSINESS STATISTICS - II

Day : Tuesday  
Date : 29/05/2018

S-2018-4296

Time : 02.00 PM TO 05.00 PM  
Max. Marks : 80

N.B.

- 1) Attempt any **FIVE** questions from Section – I each question carries **10** marks.
- 2) Attempt any **TWO** questions from Section – II each question carries **15** marks.
- 3) Answers to both the sections should be written in the **SEPARATE** answer books

SECTION – I

- Q.1 Three cards are drawn from a well shuffled pack of 52 cards. What is the probability that:
- a) All cards are of same suit
  - b) All cards are number cards
- Q.2
- a) Explain briefly various types of sampling.
  - b) Explain Bayes Theorem with a suitable example.
- Q.3 Explain various components of 'time series analysis.'
- Q.4 Compute Karl Pearson's coefficient of correlation from the following
- |   |    |    |    |    |    |    |    |    |
|---|----|----|----|----|----|----|----|----|
| X | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| Y | 70 | 72 | 69 | 76 | 74 | 79 | 80 | 74 |
- Q.5 Find the probability of getting exactly 5 Heads in 6 throws of a coin.
- Q.6 Explain census method of data collection along with its merits and demerits.
- Q.7 Write short notes on:
- a) Type I and Type II errors
  - b) Normal Probability Distribution

SECTION – II

- Q.8 The following table shows the conditions of home and condition of child .

Home	Condition of Child			Total
	Clean	Fairly Clean	Dirty	
Clean	76	68	25	139
Not Clean	43	17	47	107
Total	119	55	72	246

Do these results suggest that the condition of the home affects the condition of child? (At 5% level of significance, the value of  $\chi^2 = 5.991$  for 2 degrees of freedom)

P.T.O.

**Q.9**

Only the following results are available from the records of a partially destroyed laboratory.

Variance of  $x = 9$

Regression Equations  $8x - 10y + 66 = 0$  and  
 $40x - 18y = 214$

From the above information, calculate the value of

- i) Arithmetic mean of X and Y
- ii) Coefficient of correlation between X and Y
- iii) Standard Deviation of Y series.

**Q.10 a)** Explain association of attributes with a suitable example .

**b)** Find the value of x if

$${}^{24}C_x = {}^{24}C_{2x+3}$$

\* \* \*

290518-e-sdemgt-pune