

**B.B.A. (2010 COURSE) SEM- III : WINTER - 2017**

**SUBJECT: BUSINESS STATISTICS-II**

**Day:** Monday  
**Date:** 20/11/2017

**Time:** 02.00 PM TO 05.00 PM

**W-2017-1564**

**Max. Marks: 70**

**N.B:**

- 1) **Q. No. 1 is COMPULSORY.**
- 2) Attempt **ANY FOUR** questions from **Q. No.2 to Q. No.7.**
- 3) Each questions carries **14** marks.

**Q.1** Find correlation coefficient between the sales and expenses from the data (14) given below.

Sales (Rs,Lakhs)	50	50	55	60	65	65	65	60	60	50
Expenses (Rs. Lakhhs)	11	13	14	16	16	15	15	14	13	13

**Q.2** The following table gives the aptitude test scores and productivity indices of (14) 10 workers selected at random:

Aptitude scores	60	62	65	70	72	48	53	73	65	82
Productivity Index	68	60	62	80	85	40	52	62	60	81

Hence obtain two regression equations.

**Q.3 a)** A problem in Business Statistics is given to five students: A, B, C, D and E. (07)  
Their chances of solving it are  $1/2$ ,  $1/3$ ,  $1/4$ ,  $1/5$ , and  $1/6$ .  
What is the probability that the problem will be solved?

**b)** Two dice are tossed. What is the probability that the sum is divisible by either (07)  
3 or 4.

**Q.4** Assume that on an average one telephone number out of fifteen is busy. What is the probability that if six randomly selected telephone numbers are called

**a)** Not more than three will be busy? (07)

**b)** At least three of them will be busy? (07)

**Q.5** What is Statistical Decision Theory? Explain briefly the ingredients of a (14)  
decision problem with suitable example.

**Q.6 a)** In a certain interview, there are 126 candidates of which 70 were boys. 36 (07)  
candidates were successful among them 20 were boys. Calculate coefficient  
of association Q.

**b)** Define Binomial distribution. What is the probability of guessing correctly at (07)  
least eight out of twelve answers in a TRUE/ FALSE objective test?

**Q.7** Write short notes on :(ANY TWO) (14)

- a) Bayes' theorem
- b) Method of Least Squares
- c) Normal Distribution

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