M.Com. (Semester – I) Examination, November 2016
COC 102 : BUSINESS STATISTICS (OA-18)

Duration : 3 Hours   Total Marks : 60

Instructions : 1) This paper consist of **nine (9)** questions carrying **equal** marks.
2) Question No. **1** consist of **5 compulsory** questions of **2 marks each**.
3) Answer **any five(5)** questions from **2, 3, 4, 5, 6, 7, 8**.
4) Tables to be provided **wherever** required.

1. Answer the following questions :   (2×5=10)
   i) Define Business Research Method.
   ii) Bringout the difference between Correlation and Regression.
   iii) What is foot note and end note ?
   iv) Mention any four parametric tests.
   v) Need of applying the measures of Skewness and Kurtosis.

2. Fit a straight line trend to the following data and estimate the likely profit for the year 2004 :   **10**

Year	1997	1998	1999	2000	2001	2002	2003
Profit (in Laks Rs.)	60	72	75	65	80	85	95

3. a) The coefficient of rank correlation between marks in statistics and marks in mathematics obtained by certain group of students is 0.8. If the sum of the squares of the differences in ranks is given to be 33, find the number of students in the group.   **4**

   b) A survey was conducted to study the relationship between expenditure on accommodation and expenditure on food and entertainment and the following results were obtained :   **6**

	Mean	S.D.
Expenditure on Accommodation	Rs. 173	Rs. 63.15
Expenditure on Food and Entertainment	Rs. 47.8	Rs. 22.98

Coefficient of correlation is 0.57.

Find two regression equations and estimate the expenditure on food and entertainment, if the expenditure on accommodation is Rs. 200.

4. Suppose that a random sample of n = 5 was selected from the vineyard properties for sale in Sonoma Country, California, in each of three years. The following data are consistent with summary information on price per acre for disease-resistant grape vineyards in Sonoma Country. Carry out an ANOVA to determine whether there is evidence to support the claim that the mean price per acre for vineyard land in Sonoma Country was not the same for each of the three years considered. Test at the 0.05 level and at the 0.01 level.

2006 : 30000 34000   36000   38000   40000

2007 : 30000 35000   37000   38000   40000

2008 : 40000 41000   43000   44000   50000

5. From the data given below about the treatment of 250 patients suffering from a disease, state whether the new treatment is superior to the conventional treatment.

Treatment	No. of patients	
	Favourable	Not Favourable
New	140	30
Conventional	60	20
Total	200	50

(Given for degree of freedom = 1, chi-square 5 percent = 3.84.) **10**

6. Enumerate the various methods of sampling and describe two of them mentioning the situations where each one is to be used. **10**

7. Discuss the various types of attitude measurement scales. **10**

8. As an researcher what steps would you follow while carrying out a successful research ? Discuss. **10**

9. What do you understand by plagiarism ? As an researcher how would you prevent plagiarism in your research report ? **10**