GOPAL GOVIND POY RAITURCAR COLLEGE OF COMMERCE AND ECONOMICS, PONDA-GOA

M.COM. (SEMESTER-I) EXAMINATION
CO102 BUSINESS STATISTICS (OB10A)

Duration: 2 hours   Total Marks: 50

Instructions: 1) Answer all questions.
              2) Each question carries 10 marks.

Q.1] Answer the following: **(5X2=10)**

a) What is the difference between correlation and regression
b) Differentiate between primary data and secondary data
c) Explain briefly null hypothesis and alternate hypothesis
d) What are the advantages of SAC
e) The mean of binomial distribution is 20 and Standard Deviation is 4. Find the value of n, p and q

Q2A] To test the hypothesis that the average number of days a patient is kept in 3 local hospital say A,B,C is same, a random check on number of days that 7 patients stayed in each hospital reveals follows:

Hospital A	Hospital B	Hospital C
8	4	1
5	3	4
9	8	9
2	7	8
7	7	7
8	1	2
2	5	3

Test hypothesis at 5% level of significance   **(10)**

OR

Q2B] The following data relates to the age of 10 employees and the number of days which they reported sick in a year.

Age	20	30	32	35	40	46	52	55	58	62
Sick Days	11	12	10	13	14	16	15	17	18	19

Calculate Karl Pearson coefficient of correlation and interpret value   **(10)**

Q3A] Explain the different method sampling. **(10)**

OR

Q3B] What are the different methods of business research? **(10)**

Q4A] Calculate the mean, Standard Deviation and coefficient of S.D from the following: **(10)**

Age under	10	20	30	40	50	60	70	80
No. Of Deaths	15	30	53	75	100	110	115	125

OR

Q4B] Below are given figures of production in (1000 tons) of a sugar factory

Year	1989	1990	1991	1992	1993	1994	1995
Production	77	88	94	85	91	98	90

1. Fit a Straight line by the method of least squares and show the trend values
2. What is monthly increase in production? **(10)**

Q5A] A bag contain 8 black, 9 white and 3 red balls, if 3 balls drawn at random. Find the probability that i) all black ii) 2 black and 1 white iii) 1 of each iv) none are red v) balls are drawn in order black, red, white. **(10)**

OR

Q5B] Using chi-square, test, whether the proportion of congress supporters in Assam are same as the proportion of congress supporters in UP, from the following data find out whether the hypothesis is justified by the same study. **(10)**

Distribution of voters

	Assam	UP
Congress	200	280
BJP	100	120