Seat
No.

B.C.A.(Part-II) (Semester-III)
Examination,November-2016
COMPUTER ORIENTED STATISTICAL METHODS(Paper-305)
Sub. Code : 63400

Day and Date :Thursday, 03-11-2016   Total Marks : 80
Time : 2.30 p.m. to 5.30 p.m.

Instructions :   1)   Question number EIGHT is compulsory.
          2)   Attempt any four questions from question number 1 to 7.
          3)   Figures to the right indicate full marks.
          4)   Use of nonprogrammable calculator is allowed.
          5)   Graph paper will be supplied on request.

Q1) a)   Define the terms: Frequency, Frequency distribution, Discrete and continuous variables.

     b)   Define median and mode. Find median and mode for following data.

Class	10-20	20-30	30-40	40-50	50-60
Frequency	7	9	15	11	8

                                                                [16]

Q2) a)   Define combined S.D. for two groups. Two samples of sizes 40 and 50 have same mean 25 but different standard deviations 19 and 18 respectively. Find mean and S.D. of combined group.

     b)   State regression coefficients. Also state any two properties of regression coefficients. You are given the following information

         $\bar{X}$ =40, $\bar{Y}$ =50, S.D. of X=2.5, S.D. of Y=3.5 and correlation coefficient(γ)=0.8. Obtain equation of regression line of X on Y. Find best estimate of X when Y=45.

                                                                [16]

Q3) a) State the relation between correlation coefficient and regression coefficients and verify them by using following data.

X	2	3	4	7	6
Y	10	7	3	1	2

b) Define Time series and state its uses. Obtain three yearly moving averages from the following data.

Year	2006	2007	2008	2009	2010	2011	2012	2013
Value	20	24	22	25	28	30	33	30

[16]

Q4) a) Define the terms: sample and population. State the advantages of sampling method over census method.

b) What is an Ogive curve? Draw a less than Ogive curve from the data given below and determine value of median from it.

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No.of students	3	9	15	30	18	5

[16]

Q5) a) Explain measure of Dispersion. Distinguish between absolute measure of dispersion and relative measure of dispersion.

b) Following data gives number of catches taken by A and B in 5 one day matches.

Catches taken by A	4	5	4	3	5
Catches taken by B	1	0	4	2	1

Find, who is consistent in the matter of taking the catches?

[16]

Q6) a) Define the term correlation and write note on scatter diagram.

b) Explain stratified random sampling. A sample of size 400 is to be drawn from a population of 8000 units, which is divided into four strata of sizes 1200, 1800, 3000, 2000. Find the sample size from each stratum by stratified sampling with proportional allocation.

[16]

Q7) a) What is meaning of statistics? Explain scope of statistics.

b) State the merits and demerits of mean. The mean salary of 50 workers were Rs.200. It was later found that two items 160 and 210 were wrongly taken as 130 and 190. Find correct mean salary.

[16]

Q8) a) Describe the method of moving averages in time series.

b) Define M.D. about mean and M.D. about median. Find M.D. about mean from the following data.

31, 35, 29, 63, 55, 72, 37

[16]

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