

M.A./M.Sc. Semester-II Examination 2017

Anthropology

Paper : VIII

(Statistics and Computer Applications)

Time : 3 Hours

Full Marks : 40

Questions are of value as indicated in the margin

Answer Question No.6 and **any three** from the rest.

1. Calculate central tendency and SD of a hypothetical normal distribution. Differentiate normal from skewed distribution 7+3=10
2. What is non-parametric test? The average blood sugar of 25 individuals who have been under treatments for four weeks for drug 'M' was summarized in the table below: 2+8=10
Before treatment (mg %) : 145, 135, 165, 132, 122, 160, 155, 160, 135, 125, 130, 155, 155, 145, 140, 130, 180, 150, 160, 170, 130, 120, 150, 160 and 165
After treatment (mg %) : 125, 115, 165, 130, 125, 116, 150, 165, 130, 110, 125, 165, 130, 150, 140, 155, 130, 160, 110, 140, 100, 102, 115, 140, and 100. Is the said drug effective?
3. What is data? A Sociologist would like to determine among children if there is a relationship between the habits of T.V. watching and obesity. A total of 500 children are selected randomly. The observed frequencies are as follows: 2+8=10

Categories	Habit of T.V. watching	No. habit of T.T. watching
Obese	155	85
Non-Obese	120	140

Can the Sociologist conclude that there is a significant association between the habit of T.V. watching and the obesity?

4. What is coefficient of determinants? The gestational age (GA) and age at peak height velocity (APH) of ten subjects are given below 2+8=10

GA: (Weeks)	34	30	32	28	35	37	32	40	41	37
APH: (Years)	16.2	17.5	17.6	16.6	15.8	16.0	17.0	17.4	16.4	15.8

Is gestational age associated with APH? Plot the association with a scatter diagram.

5. What is regression? Find the regression equation for the following series: 2+6+2=10
 $X = 24, 36, 38, 26, 60, 55, 38, \text{ and } 40$
 $Y = 48, 78, 54, 33, 78, 57, 46 \text{ and } 70$
Sketch the regression line of the relation
6. Write short notes on **any two** of the following : 5+5=10
(a) F test (b) Gene-Environment (c) Hypothesis (d) CPU