

M.A./M.Sc. Examination, 2019

Semester – II

Anthropology

Paper – VIII

(Statistics and Computer Application in Anthropology)

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. What is distribution? Calculate mean, median, mode and standard deviation of a hypothetical distribution. 3+7=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:

Before treatment (mg%): 145, 135, 165, 132, 122, 160, 155, 160, 135, 140, 130, 155, 155, 175, 140, 170, 180, 150, 160, 170, 130, 120, 150, 160 and 165

After treatment (mg %): 125, 115, 165, 130, 125, 160, 150, 165, 130, 110, 125, 165, 130, 150, 140, 155, 150, 160, 150, 140, 130, 180, 150, 140 and 160

Is the said drug effective in nature? 2+8=10

3. A researcher would like to determine if there is a relationship between the habit of smoking and the use of bi-cycle. A total of 500 adults are selected randomly. The observed frequencies are as follows:

Categories	Use of bi-cycle	No use of bi-cycle
Habit of smoking	70	170
Non smokers	160	100

Can the researcher conclude that there is a significant association between the habit of smoking and the no use of bi-cycle? 10

4. When do we calculate correlation? The local meteorological office has kept records of the demand of electricity and the daily temperature ($^{\circ}\text{F}$) during the summer months. These data are as follows:

Temperature ($^{\circ}\text{F}$): 88, 90, 80, 84, 98, 85, 86, 75, 82, 84, 94 and 95

Demand of electricity (in Mega Watt): 870, 1040, 840, 935, 1135, 1020, 870, 820, 960, 1020, 1010 and 1080

Is temperature ($^{\circ}\text{F}$) related to electricity consumption during summer month? 2+8=10

5. Briefly discuss the available methods to measure heritability in man. What is variance? 8+2=10

6. Write short note on *any two* of the following: 5+5=10

(a) *F* test

(b) Polymorphism

(c) Hypothesis

(d) Application software