

M.A./M.Sc. Examination, 2015

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. Differentiate normal from non normal distribution. Calculate central tendency and standard deviation (SD) of a hypothetical distribution. 3+4+3=10
2. What do you understand by parametric and non parametric test? Malarial parasites among sickle cell (HbS) and normal individuals (HbA) are given below. Is the sickle cell protective to malaria? 3+7=10

Group	Malarial Parasites	
	Present	Absent
Sickle cell (HbS)	15	60
Normal (HbA)	30	60

3. What is 'F' test? The weight in kg of 10 normal children and 10 undernourished children aged three years are given below: 2+8=10

Normal group: 10, 12, 12, 11, 13, 14, 12, 10, 12, 13
(Kg)

Undernourished group: 7, 8, 7, 9, 6, 9, 10, 7, 8, 10
(Kg)

Test for the statistical significance of the difference in the weight (Kg), on average between these two groups.

4. The maximum shell height and width of 10 specimens of *Bulinus sp.* were: 8+2=10
Height (cm): 15.5, 13.4, 14.5, 8.6, 5.6, 12.8, 10.4, 9.2, 8.8, 7.1
Width (cm) : 9.4, 8.8, 9.1, 5.8, 3.8, 8.5, 6.1, 6.2, 5.9, 4.9

Determine whether there is a significant relationship between shell height and width.
What is the coefficient of determination?

5. Find the regression line using the data given below: 6+2+2=10

X: 1, 2, 3, 4, 5

Y: 2, 4, 6, 8, 10

Calculate the values of Y when X = 10 and 12.

6. Write short notes on **any two** of the following: 5+5=10
 - (a) Heritability
 - (b) Histogram
 - (c) Hardware and Software
 - (d) Hypothesis