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3 (Sem–3/CBCS) GGY HC 3

2023

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GEOGRAPHY

(Honours Core)

Paper : GGY–HC–3036

(Quantitative Methods in Geography)

Full Marks : 60

Time : Three hours

The figures in the margin indicate full marks for the questions.

1. Answer the following objective type questions : 1×7=7

   (a) What is data ?

   (b) You obtained a sample data which is relatively normally distributed. Which measure of central tendency would you use to calculate the average value of the same ?

   (c) Mention *any one* of the Relative Measures of Dispersion.

Contd.

(d) Name the method where the researcher divides a population into relatively similar subpopulations and obtains a representative sample.

(e) If r is the simple correlation coefficient, the quantity r^2 is known as _____.

(f) The slope of regression line of Y on X is also called _____.

(g) Student's t-test was designed by

(i) R. A. Fisher

(ii) Wilcoxon

(iii) Wald-Wolfowitz

(iv) W. S. Gosset

2. Answer the following very short answer type questions : 2×4=8

(a) What is the objective of sampling techniques ?

(b) If in an asymmetrical distribution median is 28 and mean is 31, what will be the value of mode ?

(c) What is correlation ?

(d) What are the main objectives of time series analysis ?

3. Answer the following short answer type questions : ***(any three)*** 5×3=15

(a) What is the best measure of dispersion, and how ? If the mean and coefficient of variation of a data set are 15 and 48 respectively, then find the value of standard deviation.

(b) The temperature of two cities A and B in a winter season are given below. Find which city is more consistent in temperature changes ?

Temperature of city A in degree Celsius	18	20	22	24	26
Temperature of city B in degree Celsius	11	14	15	17	18

(c) Write a note on how Regression Analysis is useful in geographical data analysis.

(d) Write briefly about the nature and sources of geographical data.

(e) Explain the Moving Average method of Time Series Analysis.

4. Answer the following questions : ***(any three)*** 10×3=30

(a) With suitable examples, discuss the different types of levels of data measurement. Also mention their basic characteristics. 5+5=10

(b) What are different measures of dispersion ? Discuss the utility of these measures in geographical studies. 2+8=10

(c) What is meant by quantification ? Discuss its significance in geographical studies. 2+8=10

(d) What is Time Series ? Why do we need to analyse Time Series data ? Discuss with examples. 1+3+6=10

(e) What is Central Tendency ? What are its common measures ? Stating the reason for choosing, calculate the most representative value of Central Tendency for the following data : 2+2+6=10

The size of land holding of 380 families in a village of Assam

Size of land Holding (in acres)	Less than 100	100-200	200-300	300-400	400 and above
Number of Families	40	89	148	64	39

(f) What is sampling ? Discuss the various methods of sampling used by the geographers. 2+8=10