3 (Sem–3/CBCS) GGY HC 3

2022

GEOGRAPHY

(Honours)

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 ***any seven*** questions from the following very objectively : 1×7=7

   (a) Give an example of continuous data.

   (b) In which type of distribution the value of mode is smaller than that of the values of median and mean ?

   (c) What is the range of the value of coefficient of correlation with negative relationship ?

   (d) What is small sample ?

   (e) Write the formula of quartile deviation.

(f) When does the value of standard deviation become zero ?

(g) What is the formula of regression residual of dependent variable ?

(h) What does a mean in the regression equation $y = a + bx$?

(i) Give an example of interval data.

(j) Which measure of central tendency is mathematically sound ?

(k) Mention *one* relative measure of dispersion.

(l) What is meant by 'range' ?

2. Answer ***any four*** of the following questions : 2×4=8

(a) Distinguish between nominal data and ordinal data.

(b) Mention *one* property of normal distribution.

(c) Define variable with an example.

(d) What is scatter diagram ?

(e) What is discrete data ?

(f) What is meant by 'dependent variable' ?

(g) Write the formula of mean deviation.

(h) Mention *one* property of arithmetic mean.

3. Answer ***any three*** of the following questions in brief : 5×3=15

(a) What is meant by quantification ? Mention its limitations in geographical studies. 2+3=5

(b) What is sampling ? Briefly discuss its need in geographical studies. 1+4=5

(c) Compare the three measures of central tendency with respect to their meaning and utilities.

(d) Taking a meaningful hypothetical set of data, compute Spearman's rank correlation.

(e) What is physical geographic data ? Briefly discuss about the nature and sources of such data. 1+4=5

(f) What is dispersion ? Explain it with the help of a hypothetical set of data. 2+3=5

(g) Calculate median for the following data set with 10 observations :

23, 19, 35, 10, 15, 8, 11, 12, 29, 24

(h) Briefly discuss the need of time series analysis in geography.

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

(a) Discuss the significance of quantification in geographical studies.

(b) Distinguish between absolute and relative measures of dispersion and explain their usefulness with the help of a hypothetical set of data. 4+6=10

(c) Give *two* examples of time series data relating to geographical phenomena. With the help of a hypothetical set of data, carry out time series analysis by applying moving average method. 2+8=10

(d) Distinguish between random and stratified sampling. Explain the procedure of stratified sampling technique by taking a suitable example. 3+7=10

(e) What is correlation ? With necessary illustrations, explain the utilities of correlation analysis in geographical studies. 2+8=10

(f) What is regression line ? By taking a meaningful set of bivariate hypothetical data, compute the regression equation of Y on X and find out the expected values of Y for the given values of X. 2+8=10

(g) Discuss with examples the need of regression analysis in geography.

(h) Discuss the significance of the measures of dispersion in geographical analysis. Explain with relevant examples.
