বিদ্যাসাগর বিশ্ববিদ্যালয়

VIDYASAGAR UNIVERSITY

Question Paper

B.Sc. Honours Examinations 2021

(Under CBCS Pattern)

Semester - III

Subject : GEOGRAPHY

Paper : C 6 - T & P

(Statistical Methods in Geography)

Full Marks : 60 (Theory-40 + Practical-20)

Time : 3 Hours

Candidates are required to give their answers in their own words as for as practicable.
The figures in the margin indicate full marks.

(Theory)

Group - A

A. Answer any ***three*** of the following questions : 12×3=36

1. Explain different scales of measurement in Geography with suitable examples. What are attribute and variable? 10+2

2. Give a detailed account on random sampling techniques. Distinguish between cluster and stratified sampling techniques. 10+2

3. Discuss the properties of a normal curve. Highlight elements of the statistical table of z and t distribution. 7+5

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4. Mention properties of a linear regression. Distinguish between correlation and regression. 7+5

5. Define Dispersion. What is the purpose for measuring Dispersion? Write down the merits and demerits of different measures of dispersion? 2+4+6

6. What is time series data? Discuss the trend line with special reference to moving average. 2+10

Group - B

B. Answer any ***two*** of the following questions : 2×2=4

1. What is Probability sampling?

2. State the uses of Quartiles.

3. Distinguish between 'variable' and 'constant'.

4. What is the basic difference between 'standard error' and 'probable error'?

(Practical)

Paper - C 6 P

(Statistical Methods in Geography)

Marks : 20

Group - A

Answer any ***one*** of the followng questions : 20×1=20

1. The following table represents literacy rates in 100 stations. Consider the dataset and answer the following.

50.4	70.3	60.5	59.1	74.9	67.0	58.6	80.5	70.0	69.7
43.5	63.8	54.3	57.7	72.6	65.4	45.7	78.5	67.9	65.9
54.6	71.3	63.3	66.3	77.8	72.2	67.4	85.4	76.5	75.9
33.1	59.7	47.0	51.5	71.2	61.8	43.0	66.6	55.5	56.4
76.5	86.1	81.9	81.2	90.0	86.0	38.9	67.3	53.6	55.4
51.9	77.4	64.7	60.2	80.3	70.3	56.9	76.1	66.6	68.1
43.0	73.3	60.0	64.3	85.2	76.2	87.9	94.2	90.9	92.1
70.4	88.4	81.1	79.5	91.5	87.1	80.5	92.5	86.7	87.9

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74.7	87.3	81.7	80.8	90.9	86.2	50.3	76.1	63.7	59.2
75.4	88.4	82.0	84.7	92.6	88.7	67.0	86.0	76.9	75.9

(a) Use the provided random number table and select 30 percent samples from the population above applying the simple random sampling (without replacement) technique. 3

(b) Prepare a frequecny distribution table based on the sample dataset. 8

(c) Calculate sample arithmetic mean and estimate population mean. 2+2

2. The following data matrix represents literacy rate (%) and sex ratio of 10 districts of Madhya Pradesh.

Sl No	Districts	Literacy rate (%)	Sex–ratio (number of females per 1000 males)
1	Sehore	82.3	918
2	Raisen	71.1	899
3	Betul	74.3	970
4	Harda	70.1	932
5	Hoshangabad	74.0	912
6	Katni	76.5	948
7	Jabalpur	73.6	925
8	Narsimhapur	82.5	917
9	Dindori	76.8	1004
10	Mandla	65.5	1005

(a) Draw a scatter diagram with the following data and draw regression line with the application of least square method.

(b) Perform a linear regression between literacy rate (%) and sex ratio interpret the result. 10+5

(c) Practical note book and viva-voce. 5

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