



বিদ্যাসাগর বিশ্ববিদ্যালয়  
VIDYASAGAR UNIVERSITY

Question Paper

**B.Sc. Honours Examinations 2020**

(Under CBCS Pattern)

**Semester - III**

**Subject: GEOGRAPHY**

**Paper : C 6-T & C 6-P**

**Statistical Methods in Geography**

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

**Time : 3 Hours**

*Candidates are required to give their answer in their own words as far as practicable.  
The figures in the margin indicate full marks.*

**[Theory]**

Answer *any two* from the following :

2×20=40

1. Define partition values and standard deviation. How do you find out the relationship of two variables. What is best fit line in linear regression? What is co-efficient of determination ( $R^2$ ), and how do you estimate it in regression. 5+5+5+5
2. What is a random sampling? Discuss different methods of random sampling. 5+15
3. What is the scale of measurement? Discuss different types of measurement scale and their implication in research. 5+15
4. What is central tendency? How does the measures of central tendency help us to understand a geophysical process? 5+15

**C 6-P**  
**[Practical]**

Answer any one from the following :

1×20

1. The Sex—Ratio of thirty blocks of a given state is given below :

897	927	949	941	949	916	954	937
961	939	917	948	939	970	944	881
941	938	958	833	962	955	952	883
937	925	959	893	933	944		

(a) Construct a frequency distribution table with five equal classes.

(b) Calculate the mean, median and mode.

(c) Calculate the 3<sup>rd</sup> decile and upper quartile.

(d) Estimate the standard deviation of the given distribution.

5+5+5+5

2. The following data shows the month wise rainfall in mm. and the temperature in °C of a given station.

<u>Month</u>	<u>Rainfall</u>	<u>Temperature</u>
January	3.0	17.5
February	17.0	19.0
March	15.0	33.2
April	152.0	26.5
May	400.0	32.5
June	1021.0	30.5
July	818.0	28.5
August	694.0	28.5
September	414.0	27.5
October	141.0	27.0
November	58.0	24.5
December	0	19.0

(a) Draw the scatter diagram showing the distribution of rainfall against temperature.

(b) Calculate the Spearman's Rank Correlation.

(c) Perform a linear regression between rainfall and temperature and interpret the result.  
5+5+10

3. The month wise rainfall data (in mm) of the following two stations are given below.

Station	A	Station	B
J	0	J	0
F	1.2	F	0
M	0.5	M	0.3
A	0.1	A	0
M	5.0	M	2
J	30	J	10
J	100	J	30
A	250	A	80
S	240	S	100
O	50	N	50
N	11	N	50
D	5	D	2.5

Based on the measures of dispersion, which of these two stations do you think have highest degree of consistency?

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