

Roll No.

Total Pages : 3

CMDE/D-23 **4412**
STATISTICAL METHODS IN
GEOGRAPHY

Paper-M-GEO-104

Time Allowed : 3 Hours]

[Maximum Marks : 70

Note : Attempt **five** questions in all, selecting **one** question from each Unit. Question No. **1** is compulsory. All questions carry equal marks.

Compulsory Question

1. Answer the followings in brief : 7×2=14

- (a) What is Sturge's law?
- (b) What does coefficient of determination signify?
- (c) What is t test?
- (d) What is Systematic sampling.
- (e) Similarity between histogram and frequency polygon.
- (f) What is Multivariate?
- (g) What is Inferential statistics?

UNIT-I

2. (a) What is Median as a measure of Central tendency?
(b) Measure quartile deviation from following data :

Class interval	30-32	33-35	36-38	39-41	42-44	45-47	48-50
Frequency	15	19	21	21	34	12	10

4,10

3. What is relative measure of deviation? Write its significance. Calculate the variation from following data and state which distribution of which station is more inequality. 14

Station A	68	73	61	66	69	96	79	54
Station B	82	73	87	75	61	97	55	81

UNIT-II

4. The average (mean) Annual rainfall of Station A is 107 cm and standard deviation is 22 cm. Assuming that the distribution is normal, what is the probability that, the year 2015 will receive : 14
- (i) Less than 80 cm of rainfall.
 - (ii) More than 125 cm of rainfall.

5. What do you understand by sampling? Describe its type and state which sampling measure would you adopt to obtain information on crime among children of Haryana. 14

UNIT-III

6. The following table shows the data of discharge (in m³) as X and annual maximum floods as Y of different rivers in India. Plot the scatter diagram and find out Karl Pearson Correlation Coefficient. 14

X	81	30	64	42	60	74	46	33	21	37
Y	43	46	82	28	140	156	27	38	61	85

7. What do you understand by Line of best fit? Calculate the beta coefficient and a from following data : 14

%Urban	37	40	36	41	38	42	38	40	44	33
%Literate	68	71	83	81	82	78	76	85	56	

UNIT-IV

8. What do you understand by Correlation matrix? Find out the Multiple correlation of R_{12.3} and R_{13.2} when r₁₂ is .45; r₂₃ is .65 and r₃₁ is .56. 4,10
9. What do you understand by Residual? Write its significance in Geographical studies. 14