

M.Sc. 2nd Semester Examination, 2011

REMOTE SENSING & GIS

PAPER—RSG-204

Full Marks : 40

Time : 2 hours

The figures in the right-hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

GROUP – A

[Marks : 20]

Answer any two questions : 10 × 2

- 1. (a) Distinguish between variable and attribute.**
- (b) Briefly explain the different parts of a standard statistical table.**

(Turn Over)

(c) Draw histogram and polygon for the following data :

Scores in IPL Match	: 0-9	10-19	20-29	30-39	40-49
No. of Batsman	: 13	22	35	21	9
					2 + 4 + 4

2. (a) For any two observations x_1 and x_2 prove that GM is the geometric mean of AM and HM.
- (b) Prove that Arithmetic mean depends on both change of scale and change of origin.
- (c) Find out the Median and Mode of the following information :
- 5, 8, 2, 4, 5, 7, 9, 4.
- (d) Among Mean, Median and Mode which is appropriate to find out the central value of the data with open-end class and why ? 3 + 3 + 2 + 2
3. (a) What do you mean by interquartile range ?
- (b) Illustrate Standard Deviation. What is the relation between Standard Deviation and Variance.

- (c) Distinguish between absolute and relative measure of dispersion.
- (d) What are the parameters of Normal Distribution ? $2 + 3 + 4 + 1$
4. (a) Explain the term 'perfectly correlated' and 'un-correlated'.
- (b) What is regression ? Why there are two regression equations ?
- (c) Find out the relation between co-rrrelation coefficient and regression coefficients.
- (d) What is the probability of getting two heads in a tossing of two coins ? $3 + 3 + 2 + 2$

GROUP – B

[Marks : 20]

Answer any *two* questions : 10×2

1. State the importance of Geostatistics in the study of GIS. What is the basic difference between

nearest neighbour operation and spatial auto co-relation and what are their advantages ? How spatial auto corelation is used for digital image analysis ? 3 + 3 + 2 + 2

2. What do you mean by ranking of a distribution ? State the difference between ranking and standardization. Calculate the amount of expected population of different police stations of West Midnapore district on the basis of Ranking Method : 2 + 2 + 6

<u>SL. No.</u>	<u>Name of P.S.</u>	<u>Population</u>
1.	Jhargram	9,075
2.	Kharagpur	1,39,070
3.	Ghatal	20,060
4.	Daspur	20,470
5.	Salboni	9,070
6.	Midnapore	1,15,036

3. What do you mean by dispersion ? Draw a Lorenz curve from the following data and compare the variability from the equal line : 2 + 8

State	Total Pop.	Sc.Pop.	S.T. Population
W.B.	43,503	5,775	1,658
Kerala	14,958	911	1,920
M.P.	56,353	7,951	4,933
Bihar	26,697	1,825	3,734
J & K	10,037	1,896	0
A.P.	3,460	770	142
Assam	4,617	381	0
Gujrat	28,897	1,892	486
H.P.	41,654	5,454	8,387

4. State different conditional approaches of Bivariate correlation. What do you mean by co-relation co-efficient ? Calculate correlation co-efficient from given data. 3 + 2 + 5

<i>X</i>	12	9	8	10	11	13	7
<i>Y</i>	14	8	6	9	11	12	3