2015

M.Sc.

2nd Semester Examination

REMOTE SENSING AND GIS

PAPER—RSG-204

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

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

Illustrate the answers wherever necessary.

Use Separate answer book for each Group.

Group–A

(*Fundamental Statistics Concept*)

[Marks : 20]

Answer any *two* questions. 10×2

1. (a) Distinguish between primary data and secondary data.

(b) Define Statistical Table. What are the essential parts of table ?

(c) Draw histogram and frequency polygon for the following freqeuncy distribution :

Wages (Rs.) :	50–59	60–69	70–79	80–89	90–99
No. of employees :	8	10	20	15	10

2+3+5

2. (a) What are the advantages and disadvantages of Arithmetic Mean ?

(b) A car travelled 120 miles at 40 mile per hour and again 100 miles at 50 mile per hour. What is the average speed of the car ?

(c) Find the Central value of the following distribution by using appropriate measure of Central Tendency :

Value :	Less than 100	100–200	200–300	300—400	400 and above
Frequency :	40	89	148	64	39

3+3+4

3. (a) What is standard deviation ? State its two important properties.

(b) Define 'Coefficient of Variation'. What are the special uses of this measure ?

(c) The scores of two batsman, A and B, in six innings of IPL match :

A :	32	28	47	63	71	39
B :	19	31	48	53	67	90

Find which batsmen is more consistent in scoring.

3+3+4

4. (a) What is Skewness and Kurtosis ? How they measure ?

   (b) State the important properties of Correlation coefficient.

   (c) Estimate the correlation coefficient between x and y:

x	:	5	7	9	11	13	15
y	:	1.7	2.4	2.8	3.4	3.7	4.4

3+3+4

Group–B

(*Statistical Application in GIS*)

[Marks : 20]

Answer any *two* questions : 10×2

1. What do you mean by variogram ? How it is related to covariance ? What are the lag tolerance and directional tolerance ? 3+3+4

2. Briefly discuss different techniques of Kriging. Explain the advantages of kriging technique. 7+3

3. Critically discuss different techniques of sampling with suitable examples. What do you mean by inverse distance weighted interpolation method. 6+4

4. Write short notes on the following topics : $2\frac{1}{2} \times 4$

(a) Theissen polygon ;

(b) Principle component transformation.

(c) Logistic regression method in GIS allocation.

(d) Block kriging.
