

2017

M.Sc.

3rd Semester Examination

REMOTE SENSING AND GIS

PAPER—RSG-302

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

(Fundamentals of Research and Project Management)

[Marks : 20]

Answer any *two* questions.

2×10

1. (a) What is the need for research ?

(b) What is research process ?

(Turn Over)

(c) What are the steps involved in research process? 2+3+5

2. (a) What is a research problem?

(b) What are the criteria for selecting problem?

(c) How to define the problem of research? 2+3+5

3. (a) Define "hypothesis".

(b) How will you frame it? 4+6

4. (a) What are the sources of research problem?

(b) What are the characteristics of good research design?

(c) What is sampling in research study? 3+3+4

Group-B

(Geostatistics)

[Marks : 20]

Answer any *two* questions. 2×10

1. What do you mean by local and focal statistics in GIS? 2+8

2. What do you mean by correlation coefficient and coefficient of determination ?

Estimate multivariate correlation coefficient—

where $r_{y, x_1} = 0.79$, $r_{y, x_2} = 0.88$ and $r_{x_1, x_2} = 0.66$.

Test the significance of estimated correlation coefficient (Critical values of r are 0.666 and 0.798 at levels 0.05 and 0.01 respectively with 7 degrees of freedom).

4+3+3

3. Explain spatial autocorrelation Give a brief account on variogram and its role in interpolation. 4+6

4. Briefly discuss different types of kriging used in GIS.

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