　　　　PG/IIIS/RSG-302/15

M.Sc. 3rd Semester Examination, 2015

RS & GIS

PAPER — RSG-302(Gr.-A + B)

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

(*Research Methodology and Project Management*)

GROUP —A

(*Fundamental of Research*)

[*Marks* : 20]

Answer any **two** questions

1.　(*a*) What is research methodology ?

　　(*b*) What are the steps involved in research process ?

(c) How do you formulated the research problem ?   2 + 5 + 3

2. (a) Explain "the meaning of hypothesis".

(b) Explain the characteristics of hypothesis with suitable example.

(c) State the important uses of hypothesis.
                                        2 + 4 + 4

3. (a) What is sampling ?

(b) Explain the importance of sampling.

(c) Explain the characteristics of a good sample.   2 + 4 + 4

4. Short notes (answer any *two* questions) :   2 × 5

(i) Define cluster sampling

(ii) Distinguish between Regression and Correlation analysis.

(iii) Define stratified Random Sampling

(iv) Explain probability sampling.

GROUP – B

[*Marks* : 20].

Answer any **two** questions

1. What is model calibration and validation ? What do you mean by alternative hypothesis (H_a) and null hypothesis (H_0) ? Why testing of hypothesis is needed in any research ? 2 + 5 + 3

2. Estimate Standard Error (68 % level of confidence) of the following regression analysis of x and y variables

Sl. No.	x	y	r^2
1	5	6·1	
2	2	9·5	0·982
3	1	11·9	
4	9	1·2	
5	4	8·3	

What will be the range of predicted score at 95% level of confidence where $\hat{y} = 7$? Why ethical issues are important for any research ?

6 + 2 + 2

(*Turn Over*)

(4)

3. Define research project. Write down the steps involved in preparation of a research project proposal with an example of application of geoinformatics in water resource management.

$2 + 8$

4. (*i*) Discuss a project lifecycle in details.

(*ii*) How do you classify projects ?

(*iii*) Discuss in brief risk management plan.

$4 + 4 + 2$