PG/IVS/RS & GIS/2201
& 2202/10

# M.Sc. 4th Semester Examination, 2010

## REMOTE SENSING & GIS

(*Research Methodology and Project Management*)

PAPER—XIII/ RG - 2201 & 2202

*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*

RG—2201

(*Research Methodology*)

[*Marks*: 20]

Answer any **two** questions

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

(*b*) What are the steps involved in research process? 5 + 5

2. (*a*) What do you mean by the significance of research problem?

(*b*) Explain the meaning of hypothesis. 5 + 5

3. (*a*) Name the characteristics of a good research design.

(*b*) State the following statements are *True* (T) or *False* (F) :

(*i*) Variance and variable are one and the same.

(*ii*) Holding a factor constant consists of reducing a variable to a constant.

(*iii*) The purpose of controlling variance is to enhance the validity of the results.

(*iv*) A randomly selected sample reflects the characteristics of population.

(*v*) In stratified random sampling, the population elements are homogeneous. 5 + 5

4. Answer in *one* or *two* sentences : $2\frac{1}{2} \times 4$

(*i*) What are the two purposes of research design ?

(*ii*) Mention the four ways of controlling variance.

(*iii*) What is sampling ?

(*iv*) Define probability sampling.

RG—2202

(*Project Management*)

[*Marks* : 20]

Answer any **two** questions

5. (*a*) What is the need for determining sample size ? Discuss.

(*b*) What are the sources of a research problem ? 5 + 5

6. (*a*) How can a GIS project be designed and managed ?

(*b*) What is a rich picture and how is it used to assist GIS project design ? 5 + 5

7. (*a*) What is a root definition and how is it useful in project management ?

(*b*) What are the problems that may be encountered when implementing a GIS ? 5 + 5

8. (*a*) What is the difference between a physical and a conceptual data model ?

(*b*) Answer any *two* :

(*i*) GANTT charts

(*ii*) PERT

(*iii*) CASE

(*iv*) Map algebra. $5 + (2\frac{1}{2} \times 2)$