M.Sc. 1st Semester Examination, 2011

REMOTE SENSING AND GIS

PAPER — RSG-101(Gr.-A + B)

(Theory)

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

(*Surveying And Projection*)

[*Marks* : 20]

Time : 1 hour

Answer any **two** questions from the following

1. What is the purpose of Hydrographic Survey ? Explain the method of discharge estimation of a river with suitable example. $2 + 8$

2. Explain the justification of uses of dumpy level, prismatic compass and clinometer in preparation of geomorphological mapping with field survey techniques. 4 + 6

3. Explain the properties of polyconic projection and UTM projection. 5 + 5

4. Write short notes (any *two*) : 5 + 5

    (*i*) Map accuracy standards

    (*ii*) Cadastral survey.

    (*iii*) Significance of Mercator projection

    (*iv*) Map projection transformation

    (*v*) Differentiate between Orthographic and Orthomorphic map projections.

GROUP —B

(*Cartography and Digital Mapping*)

[*Marks* : 20]

Time : 1 hour

Answer any **two** questions from the following

1. (*a*) Briefly narrate the basic concept of cartography.

   (b) Define map.

   (c) What are the utility of maps ?   3 + 2 + 5

2. (a) Define symbol.

   (b) Explain different types of symbols with example.

   (c) What is meant by cartographic database and why is it useful ?   2 + 3 + (2 + 3)

3. (a) Describe briefly two ways of multivariate mapping.

   (b) Discuss the purpose of dot, isopleth and choropleth maps.

   (c) What are the essential software for digital mapping ?   5 + 3 + 2

4. (a) What is meant by interactive cartography ?

   (b) What are the different phases of computer cartography ?

   (c) Discuss vector data structures.   3 + 3 + 4