M.Sc. 3rd Semester Examination, 2011

REMOTE SENSING AND GIS

PAPER—RSG-301(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

[*Marks* : 20]

Answer any **two** questions

1. Discuss elaborately the historical development of the landuse landcover classification system for mapping purpose used by National Remote Sensing Centre, ISRO. 10

2. Define landuse and landcover. Explain the use of multiseasonal and time sequential remotely sensed data for landuse and landcover mapping on 1 : 50,000 scale with the help of activity flowchart. 10

3. Briefly discuss the methods of estimation of evapotranspiration, interception and precipitation through remote sensing. 3 + 3 + 4

4. What do you understand by parametric watershed modeling ? How remote sensing can play a major role in water quality inventory and monitoring ? 4 + 6

GROUP – B

[*Marks* : 20]

Answer any **two** questions

1. What are the advantages of microwave remote sensing in soil moisture estimation and flood plain mapping ? How could oil-films and hot plumes in water be dated by remote sensing ? 6 + 2 + 2

2. Discuss the role of evapotranspiration, run off, soil types in watershed management through RS data usage. 10

3. What are the methods used to target ground water in different geological formations ? What is hydrobotanical studies ? 8 + 2

4. How cloud and snow are distinguished in different parts of the electromagnetic spectrum ? Discuss the physical, economic and environmental factors to be taken into consideration during dam site selection and canal alignment ? 3 + 4 + 3