

Code No: RT41015

R13

Set No. 1

IV B.Tech I Semester Supplementary Examinations, February - 2019
REMOTE SENSING AND GIS APPLICATIONS
(Civil Engineering)

Time: 3 hours

Max. Marks: 70

Question paper consists of Part-A and Part-B
Answer ALL sub questions from Part-A
Answer any THREE questions from Part-B

PART-A (22 Marks)

1. a) What are the ideal atmospheric conditions for remote sensing? [4]
- b) Define convolution filtering. Mention about various filtering techniques used. [4]
- c) What are the basic characteristics of map? [3]
- d) What do you mean by network tracing? [3]
- e) Explain how GIS can be an efficient tool in predicting the acreage and is beneficiary to insurance companies. [4]
- f) What the main objectives of watershed management program? [4]

PART-B (3x16 = 48 Marks)

2. a) Explain energy interaction with the surface of earth? [8]
- b) Discuss about different types of sensors used in the remote sensing. [8]
3. a) What is supervised classification? What are the basic steps and stages involved in a typical supervised classification? [8]
- b) What are the different spatial filtering techniques used in image processing? [8]
4. a) Define GIS. Briefly explain about spatial and aspatial data types with relevant examples. [8]
- b) Discuss UTM. State the limitations of UTM system. [8]
5. a) With an example discuss about edge matching. [8]
- b) Define proximity and what do you mean by optimal path. [8]
6. a) How best you can apply remote sensing and GIS technology as a tool for LULC mapping and planning? [8]
- b) Discuss how GIS and RS can be useful to improve the road traffic management in a metropolitan city. [8]
7. a) Explain how satellite imagery can be used for extraction of watershed parameters stating their advantages and disadvantages. [8]
- b) What is the methodology that can be adopted for flood forecasting and early warning to the stakeholders using RS and GIS? [8]