

Code No: R1641014

R16

Set No. 1

IV B.Tech I Semester Supplementary Examinations, July/Aug - 2021

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 FOUR questions from Part-B

PART-A(14 Marks)

1. a) Define the term Remote Sensing. [3]
b) What is Image Classification? [3]
c) What is Rasterization in GIS? [2]
d) What is Spatial data? Give examples. [2]
e) Which Satellite data is best suited in Urban Studies for Cadastral Mapping? [2]
f) What is Flood risk mapping? [2]

PART-B(4x14 = 56 Marks)

2. a) What is an Electromagnetic Radiation? Explain the various regions in Electromagnetic spectrum. [7]
b) What is Digital Image? Explain the types of formats to store digital image data. [7]
3. a) Explain Geometric Corrections and Radiometric Corrections in Image Pre-processing. [7]
b) What is Histogram of digital image? Differentiate between Histogram Equalization and Contrast Stretching in Image Enhancement. [7]
4. a) What are the components of Geographical Information System? Explain. [7]
b) What is Vector data? How Spaghetti Model is used to represent the Earth Surface. [7]
5. a) Explain the different types of Buffer analysis with its Applications in GIS. [7]
b) Explain the Arithmetic operators used in Overlay operations. [7]
- 6 Explain the methodology for Land Use/ Land Cover (LU/LC) Level-1 classification with flowchart using Remote Sensing and GIS. [14]
- 7 Explain how Remote Sensing and GIS is useful to identify Groundwater potential recharge zones with a flowchart. [14]