

Code No: **R1641014**

**R16**

**Set No. 1**

**IV B. Tech I Semester Supplementary Examinations, November - 2022**

**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) What is remote sensing state and its applications [2]  
b) Differentiate supervised and unsupervised classification [3]  
c) Mention the application areas of GIS [2]  
d) Write a short note on overlay function [2]  
e) List out urban applications of GIS [3]  
f) State the importance of RS &GIS in flood monitoring [2]

**PART-B (4x14 = 56 Marks)**

2. a) Explain electromagnetic radiation and electromagnetic spectrum [7]  
b) Discuss ASTER, RISAT and CARTOSAT in detail [7]
3. a) What is 'visual image interpretation'? Discuss the various image interpretation elements. [7]  
b) Discuss image classification in detail and explain them. [7]
4. a) Explain raster data models and vector data models with an examples. [10]  
b) Explain key components of GIS. [4]
5. a) Explain raster overlay operations and arithmetic operators. [7]  
b) Discuss network tracing and buffer analysis in detail. [7]
6. a) What are the remote sensing requirements for forestry applications [7]  
b) Illustrate various sensors are useful for land use/land cover studies [7]
7. a) How remote sensing is useful in watershed management? Explain. [7]  
b) Discuss ground water prospects and potential recharge zones. [7]