

PRAGATI ENGINEERING COLLEGE: SURAMPALEM
(AUTONOMOUS)
III B.Tech I Semester Supplementary Examinations, May - 2024
REMOTE SENSING AND GIS APPLICATIONS
(Civil Engineering)

Time: 3 hours

Max. Marks: 70

Answer ONE Question from each Unit
All Questions Carry Equal Marks

| Q. No. | Questions | BTL | CO | Marks |
|-------------------|--|-----|-----|-------|
| UNIT – I | | | | |
| 1. | a) Describe briefly the different elements of remote sensing. | K2 | CO1 | 7M |
| | b) Explain in detail about the airborne remote sensing and space borne remote sensing. | K2 | CO1 | 7M |
| OR | | | | |
| 2. | a) What do you understand by remote sensing? Briefly explain the remote sensing process. | K2 | CO1 | 7M |
| | b) What is resolution of a sensor? Describe various types of sensors used in remote sensing. | K2 | CO1 | 7M |
| UNIT – II | | | | |
| 3. | a) Explain the digital image processing sequence by means of a flow chart | K2 | CO2 | 7M |
| | b) Explain the difference between supervised and unsupervised classification | K2 | CO2 | 7M |
| OR | | | | |
| 4. | a) Discuss about the basic elements of image interpretation. | K2 | CO2 | 7M |
| | b) What are the advantages and limitations of visual image interpretation and digital image processing? | K2 | CO2 | 7M |
| UNIT – III | | | | |
| 5. | a) Define GIS. Briefly explain about spatial and non spatial data types with relevant examples | K2 | CO3 | 7M |
| | b) Explain different types of Map projections. | K2 | CO3 | 7M |
| OR | | | | |
| 6. | a) Describe the key components of GIS | K2 | CO3 | 7M |
| | b) What are raster data models and vector data models? | K2 | CO3 | 7M |
| UNIT – IV | | | | |
| 7. | a) What is network analysis? Explain the functionality of optimal path finding with respect to shortest distance between two points. | K2 | CO4 | 7M |
| | b) Explain various arithmetic operators with examples on raster data. | K2 | CO4 | 7M |
| OR | | | | |
| 8. | a) What do you mean by Vector overlay? Explain Point-in-polygon overlay. | K2 | CO4 | 7M |
| | b) What do you understand by spatial analysis? Why is it required? | K2 | CO4 | 7M |
| UNIT – V | | | | |
| 9. | a) Discuss how GIS and RS can be useful to improve the road traffic management in a metropolitan city. | K2 | CO5 | 7M |
| | b) Discuss RS & GIS applications in land cover and land use. | K2 | CO5 | 7M |
| OR | | | | |
| 10. | a) Explain the Remote sensing and GIS applications in agriculture. | K2 | CO5 | 7M |
| | b) Explain the Remote sensing and GIS applications in Geology. | K2 | CO5 | 7M |