



R20 Regulation

Subject code:308AA

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech VIII Supplementary Examinations, November 2025

GEO INFORMATICS

(Common to ME & CSE)

Maximum Marks: 70

Date: 27.11.2025

Duration: 3 hours

- Note: 1.This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10X2M=20 Marks)		Marks	CO	Bloom Tx
1	What is relief displacement in an aerial photograph and why does it occur?	2M	1	BL2
2	Define digital photogrammetry.	2M	1	BL1
3	Name two Earth observation satellites.	2M	2	BL2
4	What is spatial resolution in remote sensing imagery?	2M	2	BL1
5	Differentiate between land use and land cover.	2M	3	BL2
6	What is image enhancement and why is it applied to raw satellite images?	2M	3	BL1
7	What is spatial data in GIS, and how is it different from attribute data?	2M	4	BL1
8	Provide one example of a real-world application of GIS.	2M	4	BL1
9	Define the term "datum" in geodesy or mapping.	2M	5	BL1
10	What does GNSS stand for? Write its purpose?	2M	5	BL1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	Bloom Tx
11	a) Discuss in detail the fundamentals of aerial photograph interpretation. b) Describe how various image characteristics are used to identify ground features.	5M 5M	1	BL2
OR				
12	a) Discuss the process of flight planning in aerial surveys. b) Explain the principle of stereoscopy in aerial photogrammetry.	5M 5M	1	BL2
13	a) Write an essay on the principles of remote sensing. b) Describe how an FCC image is created from satellite data.	5M 5M	2	BL3
OR				
14	a) Explain in detail the various types of resolution in remote sensing. b) Discuss in detail the concept of spectral signatures of Earth features and the "multi" concepts in remote sensing.	5M 5M	2	BL3
15	Explain the role of image histograms in satellite image processing. How can histogram analysis be used for image enhancement?	10M	3	BL3
OR				

16	Discuss the steps and principles of supervised classification and unsupervised classification.	10M	3	BL3
17	a) Describe the basic components of a GIS. b) Explain the role of each component in making a GIS functional.	5M 5M	4	BL3
	OR			
18	a) Explain the topology in GIS. b) Discuss how topological relationships are used in spatial analysis and data validation.	5M 5M	4	BL3
19	a) Describe the basic nature of GPS satellite signals. b) What information does these signals contain and how does a GPS receiver use them to calculate position?	5M 5M	5	BL4
	OR			
20	a) Explain the difference between a geographic coordinate system and a projected coordinate system. b) Discuss the differences between static GPS surveying and kinematic GPS surveying.	5M 5M	5	BL4