R20 Regulation *Subject code: 3E6AB*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VI Semester Regular/Supplementary Examinations, July 2024

REMOTE SENSING & GEOGRAPHIC INFORMATION SYSTEM

(CIVIL ENGINEERING)

Maximum Marks: 70 Date:30.07.2024 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)		CO	Bloom Tx
1	How does image scale vary across a vertical aerial photograph?	1	2
2	Define parallax and its role in stereoscopic measurements	1	1
3	What are the elements involved in remote sensing.	2	1
4	What is swath?	2	1
5	What type of scale is used in Geo referencing?	3	1
6	Differentiate between Map and Scale	3	2
7	What is vector overlay operation?	4	1
8	What is Vector Data Model in GIS?	4	1
9	What is raster Data Structure?	5	1
10	What is raster analysis?	5	1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	
11	A. Explain the different types of aerial photographs and their respective uses. [5M] B. Discuss the process of measuring height using relief displacement. [5M]	1	2 3
	OR		
12	A. Define stereoscopy and explain its importance in photogrammetry. [5M] B. Explain how the perspective center, principal point, and fiducial marks relate to the geometry of the photograph. [5M]	1	2 3
13	A. What is electromagnetic spectrum? How it is useful in Remote sensing. [5M] B. Explain in detail about the interpretation for terrain evaluation. [5M]	2	2 3
	OR		
14	A. Write about the remote sensing data interpretation, visual interpretation techniques. [5M] B. Explain in detail about energy resources and energy interaction with atmosphere. [5M]	2	2 2

15	A. Explain in detail about the maps and types of maps. [5M] B. Explain in detail about the Map transformation. [5M]	3	2 2
	OR		
16	A. Explain briefly the applications of GIS in real life. [5M] B. What is geo referencing? How it is helpful in GIS. [5M]	3	3 2
17	A. What are the key differences between simple and composite features in the vector data model? [5M] B. How does the object-based vector data model differ from traditional vector models, and what advantages does it offer? [5M]	4	3 2
	OR		
18	A. Describe the GeoBase data model and its applications. [5M] B. Describe the importance of topology in the vector data model and provide examples of topological relationships. [5M]	4	2 2
19	A. Describe the process of converting vector data to raster data. What are the potential challenges and how can they be addressed? [5M] B. What is metadata in GIS, and why is it important? [5M]	5	2 2
	OR		
20	A. Compare and contrast on-screen digitizing and manual digitizing. What are the advantages and disadvantages of each method? [5M] B. How is remote sensing data integrated into a GIS, and what are its main applications? [5M]	5	3 4