



R22 Regulation

Subject code: 4E4AF

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech IV Semester Regular Examinations, July 2024

REMOTE SENSING & GEOGRAPHIC INFORMATION SYSTEM (CE)

Maximum Marks: 60

Date:31.07.2024 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 (10X1M=10 Marks) | | CO | Bloom Tx |
|--|---|----|----------|
| 1 | Define photogrammetry. | 1 | L1 |
| 2 | Define fiducial points. | 1 | L1 |
| 3 | What is satellite orbit? | 2 | L1 |
| 4 | Explain about the electromagnetic spectrum | 2 | L1 |
| 5 | What is geo referencing? | 3 | L1 |
| 6 | What is map projection? | 3 | L1 |
| 7 | What is optimal path finding? | 4 | L1 |
| 8 | Write short notes on scanning | 4 | L1 |
| 9 | What is raster overlay operation? | 5 | L1 |
| 10 | What are the elements of Raster Data Model. | 5 | L1 |

Part-B

| Answer All the following questions. (5X10M=50Marks) | | | |
|---|---|---|----|
| 11 | A. What are Principles & Types of Aerial photogrammetry? [5] B. Compare and contrast vertical, oblique, and convergent photographs. [5] | 1 | L2 |
| OR | | | |
| 12 | A. Define parallax and explain its importance in stereoscopic measurements. [5] B. Describe how stereoscopic vision allows for depth perception in aerial photographs. [5] | 1 | L2 |
| 13 | A. Explain different types of sensor resolution. [5] B. Explain in detail about energy resources and energy interaction with earth surface. [5] | 2 | L2 |
| OR | | | |
| 14 | A. Explain in detail about the interpretation for terrain evaluation. [5] B. List out IRS satellites in detail. [5] | 2 | L2 |

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|----|--|---|----|
| 15 | A. What type of software is used in implementing GIS. How do you geo reference the data. [5] B. Explain in detail about the Map transformation. [5] | 3 | L2 |
| | OR | | |
| 16 | A. Explain in detail the components of GIS. [5] B. Explain in detail about types of map projections used in India. [5] | 3 | L2 |
| 17 | A. Which sensors are useful for land use/ land cover studies? [5] B. Explain the geometric representation of spatial features in vector data models. How are points, lines, and polygons represented? [5] | 4 | L2 |
| | OR | | |
| 18 | A. Give the details of vector data structure and mention its merits and demerits in comparison with raster data. [5] B. Explain the structure and limitations of shapefiles in GIS. [5] | 4 | L2 |
| 19 | A. How does the resolution of raster data affect its accuracy and application? [5] B. Explain on screen digitization with neat steps. [5] | 5 | L2 |
| | OR | | |
| 20 | Discuss any two GIS applications. [10] | 5 | L2 |