R18 Regulation *Subject code: 2P7AB*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VII Semester Regular/Supplementary Examinations, November 2022

REMOTE SENSING & GEOGRAPHIC INFORMATION SYSTEM

(Civil Engineering)

Maximum Marks: 70 Date:07.12.2022 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)

1 What is Vertical Aerial photography?
2 How many images are needed for stereoscopy? why?
3 What is data collection in remote sensing?
4 Which is the biggest satellite in India?
5 Define geospatial data.
6 Why the datum is important in GIS?
7 Write short notes on TIN.
8 What is the difference between association and aggregation?
9 What are the basic elements of the raster data model?
10 Write various types of digitization?

Part-B

Answer All the following questions. (5X10M=50Marks)

11 A. A camera with a 152 mm focal length takes an aerial photograph from a flying height of 2780 m above sea level and the average elevation of the terrain above sea level is 500 m. What is the scale of the photograph? 5M

B. The scale of an aerial photograph is 1:15,000. In a photo, you measure the length of a bridge to be 0.25 inches, what is the length of the bridge in feet in real life? 5M

OR

12 A. The relief displacement for a tower is 3.01 mm and the radial distance from the center of photo to the top of the tower is 66.43 mm. If the flying height is 1330 m above the base of tower, find the height of the tower. 3M

B. Explain the parallax measurement using fiducial line over a stereo pair image. 7M

13 Discuss the advantages and limitation of remote sensing. 10M

OR

14 Explain the various elements of visual image interpretation. 10M

15 A. Describe in detail the various components of GIS. 5M
B. Illustrate with an example the spatial and attribute data type. 5M

OR

16 A. Explain the various types of map projection. 5M
B. Describe the three levels of approximation of the shape and size of the Earth for GIS application. 5M

17 Explain the Topology and its importance. 10M

OR

18 List the real-world application of topology rules. 10M

19 Explain the advantages and disadvantages of the raster data model versus the vector data model. 10M

OR

20 Explain the Conversion of Existing data. 10M