Code: 13A01803 **R13**

B.Tech IV Year II Semester (R13) Regular & Supplementary Examinations April 2018

REMOTE SENSING & GIS

(Civil Engineering)

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

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1 Answer the following: (10 X 02 = 20 Marks)

(a) Write short notes on Parallax and Parallax bar.
(b) What are limitations of photogrammetry?
(c) Write short notes on active remote sensing and passive remote sensing.
(d) Write short notes on Radiant flux and Atmospheric window.
(e) What are the applications of GIS?
(f) Define spatial data.
(g) What do you understand by data manipulation of GIS data?
(h) Write a short note on vector data.
(i) What is draught? What are causes of drought?
(j) Write a short note on runoff potential indices of watershed.

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2 How to determine height in photogrammetry? Explain with a neat figure.

OR

3 (a) A vertical photograph was taken at an altitude of 1500 meters above MSL. Determine the scale of the photograph for terrain lying at an elevation of 100 meters and 380 meters, if the focal length of the camera is 14 cm.
(b) Explain with examples and sketch, scale of a vertical photograph.

UNIT – II

4 Explain various interactions of incident EM energy with the atmosphere.

OR

5 What is spectral reflectance curve and what are its utilities in remote sensing?

UNIT – III

6 With the aid of a simple diagram, describe the stages and methods of map digitizing.

OR

7 (a) Explain how buffering is carried out in raster data.
(b) Briefly describe the characteristics of the different raster data formats and explain their relative advantages and disadvantages for GIS applications.

UNIT – IV

8 Mention various surface analysis techniques. Explain the role of slope and aspect analysis in GIS.

OR

9 Explain in detail Visual Analysis Method (VAM).

UNIT – V

10 Explain the rainfall runoff relations. How are they determined?

OR

11 Explain how identification of sites for artificial recharge structures is carried out.

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