Code No: **RT41015** **R13** **Set No. 1**

IV B.Tech I Semester Supplementary Examinations, February/March - 2018

REMOTE SENSING AND GIS APPLICATIONS

(Civil Engineering)

Time: 3 hours **Max. Marks: 70**

Question paper consists of Part-A and Part-B
Answer ALL sub questions from Part-A
Answer any THREE questions from Part-B
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PART–A *(22 Marks)*

1. a) What do you understand by remote sensing? [3]
   b) What are image processing techniques? [4]
   c) Comparison between spatial and non spatial data. [4]
   d) What is data compression? [3]
   e) Write short notes on applications of RS & GIS drainage morphometry. [4]
   f) Write short notes on applications of RS & GIS in flood inundation [4]

PART–B *(3x16 = 48 Marks)*

2. a) Explain briefly about the process of Remote Sensing with a neat supporting diagram. [8]
   b) Discuss the following
      (i) Band interleaved by pixel
      (ii) Band interleaved by line [8]

3. a) Explain the term 'visual image interpretation'. Discuss the various image interpretation elements. [8]
   b) Explain the following Image Enhancement Techniques
      (i) Image reduction & magnification
      (ii) Contrast enhancement [8]

4. Explain in detail about the map projections in GIS. [16]

5. a) Describe vector overlay and raster overlay with examples. [8]
   b) What is raster overlay? Explain with suitable examples. [8]

6. a) Explain the use of RS GIS techniques in Forestry applications. [8]
   b) Discuss the geomorphological applications of GIS. [8]

7. Discuss the methodology with flowchart RS and GIS application to ground water prospects studies. [16]