

Code: R7410103

**R7**

IV B.Tech I Semester (R07) Supplementary Examinations, May 2012  
REMOTE SENSING AND GIS APPLICATIONS  
(Civil Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions  
All questions carry equal marks

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1. What is parallax? Calculate the height measurement as following conditions.
  - (a) Based on ratios displacement.
  - (b) Based on shadow length.
2. Define electromagnetic spectrum and the photon energy of visible light with examples.
3. Define and explain the following:
  - (i) Electromagnetic radiation
  - (ii) Rayleigh scattering
  - (iii) Mile scattering
  - (iv) Non-selective scattering
  - (v) Absorption
  - (v) Radiant flux density.
4. Explain the difference between digital cartography, geographical information and computer-aided design and each has different marketing.
5.
  - (a) Enumerate and differentiate vector and raster data structures with examples.
  - (b) Why database management systems are so important? Explain.
6.
  - (a) Expand and differentiate between DEM, DFM & DSM.
  - (b) Derive a standard procedure for estimating the range of civil engineering sites in an area from gridded DEM's before commencing field works.
7. What are land use / land cover? Explain, importance of land use / land covers in civilian applications.
8. How you are justifying remote sensing & GIS are playing an important role in interlinking of rivers in India?

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