



**Code: 9D12105b**

M.Tech I Semester Supplementary Examinations August 2016

**GEOGRAPHICAL INFORMATION SYSTEMS**

(Geotechnical Engineering)

(For students admitted in 2012, 2013, 2014 & 2015 only)

Time: 3 hours

Max. Marks: 60

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Explain with neat sketch, about the various regions of EMR.  
(b) Describe in detail about the energy interaction with earth's surface.
- 2 (a) What do you mean by active & passive remote sensing?  
(b) What are four types of image resolution that are having concern when interpreting remote sensing data? For each resolution type, give one example of an actual resolution value from a common remote sensor. You may use the same or different sensors for each value.
- 3 Elucidate the various types of radiometric corrections.
- 4 (a) Why do we need to apply contrast enhancement to remote sensing imagery? List one advantage and one disadvantage of contrast enhancement.  
(b) Show with the aid of a diagram, how a linear contrast stretch changes the distribution of pixel values in a histogram.
- 5 (a) What are the different kinds of adjustments available to minimize the spatial errors?  
(b) Discuss in detail about the digitization methods.
- 6 (a) Differentiate between raster and vector data.  
(b) Give a brief note on various analysis in GIS.
- 7 Describe in detail about various levels of Land use/Land cover classification and its uses.
- 8 How will you do the environment impact assessment study for a newly proposed road network using GIS?

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