Roll No. | | | | | | | | | | | | |

Total No. of Pages : 02

Total No. of Questions : 08

M.Tech. (Civil Engg. EL-III) (2016 Batch) (Sem.–3)

REMOTE SENSING AND GIS FOR WATER RESOURCES AND ENVIRONMENTAL ENGINEERING

Subject Code : MTCE -216

M.Code : 74765

Time : 3 Hrs. Max. Marks : 100

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

1. (a) With the help of a neat sketch. describe the components of remote sensing.

   (b) Explain the different types of remote sensing.

2. (a) What are the characteristics of electromagnetic radiations? Explain the forms of interaction when it strikes the ground.

   (b) Explain the spectral bands and its characteristics used in remote sensing.

3. Differentiate between :

   (a) Rayleigh scattering and Mie scattering

   (b) Passive remote sensing and active remote sensing

4. What are the requirements of a generic data collector? Describe the methods of transferring the digital data of a survey to application software.

5. (a) Explain the theoretical frame work and categories of a GIS.

   (b) Explain the four fundamental operations of a GIS

6. (a) Explain the data acquisition methods in GIS.

   (b) Explain the problems in map digitization and advantages of digitized data storage.

7. (a) Develop a frame work for using RS and GIS for rainfall - runoff modelling and management.

   (b) Develop a frame work to apply remote sensing and GIS for air pollution management.

8. Write short notes on :

   (a) Rasterization

   (b) Vectorization

   (c) GPS

   (d) DEM

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.