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Total No. of Pages : 01

Total No. of Questions : 08

Ph.D. in Faculty of Engineering (CE)

**CIVIL ENGINEERING APPLICATIONS OF RS & GIS**

M.Code : 77361

Time : 3 Hrs.

Max. Marks : 100

**INSTRUCTIONS TO CANDIDATES :**

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

1. a) Write a short note on Photo-Theodolite.  
b) Explain the differences between vertical, tilted and oblique photographs.
2. a) Explain briefly about the aerial photogrammetry with its interpretation.  
b) What are the basic elements required in photographic interpretation?
3. a) Derive the relationship between parallax and height of object.  
b) Write a note on energy interactions with the atmosphere.
4. a) Explain briefly about the basic principles of electromagnetic remote sensing.  
b) What are the attributes of an Ideal Remote sensing system? How do they differ from real remote sensing system?
5. Describe briefly about the various applications of remote sensing.
6. a) Describe briefly the components of GIS.  
b) Differentiate between GIS and GPS.
7. Write a short note on the following :  
a) RS and GIS site selection for Reservoirs.  
b) Re-modelling of water distribution systems using GIS.
8. a) Aerial photograph were taken with a camera having a focal length of 180 mm. The average elevation of the ground in the photograph was 160m. Find scale of map if flying height is 2500m. Also find the flying height to have a scale of 1:20000.  
b) Write in brief about errors in GIS and GIS software packages.

**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.