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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(CE) (2011 onwards) (Sem.-4)

GEOMATICS ENGINEERING

Subject Code : BTCE-401

Paper ID : [A1171]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A**1. Write briefly :**

- a) If the distance between two identifiable points on the photo graph is 16 cm and on the map is 4 cm, calculate the photo scale if the map scale is 1:40,000.
 - b) What are the factors that can affect the velocity of light through the atmosphere?
 - c) Define remote sensing.
 - d) Write the name of four different types of sensors for remote sensing.
 - e) Write the purpose of using a prism in EDM.
 - f) Compare between true colour and false colour composition in a satellite image.
 - g) Define spectral resolution.
 - h) Define radiometric resolution.
 - i) Classify GPS receivers.
 - j) Define crab in photogrammetry.
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SECTION-B

2. Describe the main components and the use of a photo-theodolite.
3. A photographic survey was carried out at a flying height of 4500 m. Focal length of the lens was 15 cm. The photographic plate size was 23 cm × 23 cm. The overlap along the direction of flight was 61%. Calculate the error in height measurement for an error of 0.1 mm in the parallax measurement.
4. Discuss in detail about Tellurimeter.
5. What is the physical basis of signature in the remote sensing? Discuss with the example of 4 different earth's features.
6. Write notes on the followings :

Digital elevation model; attribute information.

SECTION-C

7. Discuss the various coordinate systems and projections used in GIS.
8. Discuss the errors in GIS in details. How can we rectify these errors?
9. Discuss in details (**any two**) :

Flight planning; Crab and Drift; Tilted photograph.