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Total No. of Questions: 09

Total No. of Pages: 02

B. Tech. (CE) (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.
 - a) Discuss various components of GIS.
 - b) Enlist any two applications of Geodimeter.
 - c) Write any two characteristics of Earth Resources Satellite
 - d) Explain atmospheric windows.
 - e) Differentiate between a CAD Engine (Auto CAD etc.) and a GIS Software
 - f) Discuss importance of projections in GIS.
 - g) List kind of errors can occur in GIS.
 - h) What is WGS-84?
 - i) What is Ideal Remote Sensing?
 - j) Write full form o/DGPS and TIFF.

SECTION B

2. A vertical photograph is taken with a camera of focal length 350 mm from an elevation of 2500m above the ground. The terrain is nearly flat. What is the photo scale?
3. Explain various parts and applications of the Total Station.
4. What do you understand by across track scanning? Explain with neat diagram.
5. How GIS and RS can be useful in disaster mitigation and relief measures?
6. Discuss any two segments of GPS.

SECTION C

7. The difference in parallax between a point living at sea level and another point on a higher ground is measured and found to be 4.20mm. The flying height is 2530m above sea level, the air base is 950m and the focal length of the camera is 210 mm. Determine the elevation of the point on the higher ground.
8. Explain National Reference Systems and Worldwide Reference ellipsoid.
9. Why atomic clocks are used in GPS surveys? Name and explain any two segments a GPS system.