

B. TECH.

THEORY EXAMINATION (SEM-IV) 2016-17

GEOINFORMATICS

Time : 3 Hours

Max. Marks : 100

Note : Be precise in your answer. In case of numerical problem assume data wherever not provided.

SECTION-A

- 1 Explain the following : (10×2=20)**
- Stereoscopy
 - Relief Displacement
 - Parallax
 - Active Remote Sensing
 - Passive Remote Sensing
 - Flight Planning
 - Sun-synchronous Satellites
 - Geo-synchronous Satellites
 - Resolution
 - Spectral Reflectance Curve

SECTION-B

- 2 Attempt any five of the following : (10×5=50)**
- Derive an expression for the scale of a vertical photograph. Explain how the ground coordinates and the distances can be obtained from a vertical photograph.
 - Define relief. Derive an expression for the displacement due to ground relief.
 - Two consecutive photographs were taken with a camera of focal length 37.5 cm, at a height of 7200 m. The overlap was exactly half and the prints were 22.5 cm X 22.5 cm. The height was same for both the exposures and the aircraft flew on even peel with no drift. The ground was flat at approx. 2500 m above m.s.l. Determine the scale of the photograph and the length of the airbase.
 - How will you extract information from an aerial photograph? Explain.
 - What is a satellite image? Write short note on characteristics and formats of satellite image.
 - What do you understand by 'Image Enhancement'? Explain with reference to the Satellite Remote Sensing.
 - What do you understand by Land Use / Land Cover Classification? Explain.
 - What is GIS? What are the applications of GIS? Explain in detail.

SECTION-C

- Attempt any two of the following : (15×2=30)**
- Explain the various segments of GPS.
 - Differentiate between kinematic and differential GPS.
 - How has GPS revolutionized our life? Explain..