

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)**
- a) Stereoscopy
 - b) Relief Displacement
 - c) Parallax
 - d) Active Remote Sensing
 - e) Passive Remote Sensing
 - f) Flight Planning
 - g) Sun-synchronous Satellites
 - h) Geo-synchronous Satellites
 - i) Resolution
 - j) Spectral Reflectance Curve

SECTION-B

- 2 **Attempt any five of the following :** **(10×5=50)**
- a) 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.
 - b) Define relief. Derive an expression for the displacement due to ground relief.
 - c) 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.
 - d) How will you extract information from an aerial photograph? Explain.
 - e) What is a satellite image? Write short note on characteristics and formats of satellite image.
 - f) What do you understand by 'Image Enhancement'? Explain with reference to the Satellite Remote Sensing.
 - g) What do you understand by Land Use / Land Cover Classification? Explain.
 - h) What is GIS? What are the applications of GIS? Explain in detail.

SECTION-C

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