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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..