



(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 100406

Roll No.

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B. Tech.

(SEM. IV) THEORY EXAMINATION, 2014-15 GEOINFORMATICS

Time : 3 Hours]

[Total Marks : 100

Note : Attempt all questions. All questions carry equal marks.
Draw diagrams wherever necessary.

1 Attempt any four parts of the following : $5 \times 4 = 20$

- (a) What do you understand by the term 'Aerial Photography' ? Also write a short note on the factors that influence Aerial Photography.
- (b) Explain any two of the following :
 - (i) Classification of Aerial Photography.
 - (ii) Photographic products.
 - (iii) Photographic scale
- (c) Differentiate between 'Aerial Photography' and 'Aerial Photogrammetry'.

- (d) A flooded area is covered by 140 dots on a 25 dot/cm² grid on a 1:25000 vertical aerial photographs. Find the ground area flooded.
- (e) Explain the term 'Stereoscopy'. How is it helpful in Aerial Photography ?
- (f) Write short notes on any two of the following :
 - (i) Flight Line
 - (ii) Fiducial Marks
 - (iii) Exposure station

2 Attempt any two parts of the following : **10×2=20**

- (a) What do you understand by the term 'Remote Sensing' ? Discuss the advantages of remote sensing. Also explain ideal remote sensing system.
- (b) Explain the following :
 - (i) Spectral Reflectance Curves and Atmospheric Windows.
 - (ii) Resolution of Remote Sensing System.
- (c) Describe multi-concept in Remote Sensing. Explain how remote sensing helps in flood related studies.

3 Attempt any two parts of the following : **10×2=20**

- (a) What is digital image ? Enumerate and explain the various digital image data formats.
- (b) What do you understand by Image Rectification ? Explain the various types of image rectifications.
- (c) What is Image Classification ? Differentiate between supervised and unsupervised classification.

4 Attempt any two parts of the following : **10×2=20**

- (a) Define GIS and describe its various components in detail.
- (b) Describe any two of the following :
 - (i) Raster Data
 - (ii) Vector Data
 - (iii) Attribute Data
- (c) Explain the functions of GIS. What are the applications of GIS ?

5 Attempt any two parts of the following : **10×2=20**

- (a) Explain the principle which helps GPS to determine the position of place.
 - (b) Explain the functional segments of GPS.
 - (c) Explain the working principle of DCPS.
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