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B. Tech.
(SEM IV) THEORY EXAMINATION 2017-18
GEOINFORMATICS

Time: 3 Hours

Total Marks: 70

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 7 = 14
- What is photogrammetric survey?
 - Define remote sensing.
 - Discuss electromagnetic spectrum concept in remote sensing.
 - What do you mean by digital image processing?
 - Define GIS.
 - Describe Attribute Data.
 - What is GPS?

SECTION B

2. Attempt any *three* of the following: 7 x 3 = 21
- What do you understand by the term 'Aerial Photography'? Also write a short note on the factors that influence aerial photography.
 - What do you understand by the term 'Remote Sensing'? Discuss the advantages of remote sensing. Also explain ideal remote sensing system.
 - What is digital image? Enumerate and explain the various digital image data formats.
 - Discuss GIS and all its components in detail.
 - Explain the principle which helps GPS to determine the position of place.

SECTION C

3. Attempt any *one* part of the following: 7 x 1 = 7
- Differentiate between 'Aerial Photography' and 'Aerial Photogrammetry'.
 - 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.
4. Attempt any *one* part of the following: 7 x 1 = 7
- Explain the following:
 - Spectral Reflectance Curves and Atmospheric Windows.
 - Resolution of Remote Sensing System.
 - Describe multi-concept in Remote Sensing. Explain how remote sensing helps in flood related studies.
5. Attempt any *one* part of the following: 7 x 1 = 7
- What is Image Rectification? Explain the various types of image rectifications.
 - What do you understand by Image Classification? Differentiate between supervised and unsupervised classification.
6. Attempt any *one* part of the following: 7 x 1 = 7
- Describe the following:
 - Raster Data
 - Vector Data
 - Explain the functions of GIS. What are the applications of GIS?
7. Attempt any *one* part of the following: 7 x 1 = 7
- Explain the functional segments of GPS.
 - Explain the working principle of DCPS