Printed Pages:2 **Sub Code:RCE402**

Paper Id: 100432 **Roll No.** | | | | | | | | | | |

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

a. What is photogrammetric survey?
b. Define remote sensing.
c. Discuss electromagnetic spectrum concept in remote sensing.
d. What do you mean by digital image processing?
e. Define GIS.
f. Describe Attribute Data.
g. What is GPS?

SECTION B

2. Attempt any *three* of the following: 7 x 3 = 21

a. What do you understand by the term 'Aerial Photography'? Also write a short note on the factors that influence aerial photography.
b. What do you understand by the term 'Remote Sensing'? Discuss the advantages of remote sensing. Also explain ideal remote sensing system.
c. What is digital image? Enumerate and explain the various digital image data formats.
d. Discuss GIS and all its components in detail.
e. 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

(a) Differentiate between 'Aerial Photography' and 'Aerial Photogrammetry'.
(b) A flooded area is covered by 140 dots on a 25 dot/cm^2 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

(a) Explain the following:
1) Spectral Reflectance Curves and Atmospheric Windows.
2) Resolution of Remote Sensing System.
(b) 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

(a) What is Image Rectification? Explain the various types of image rectifications.
(b) 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

(a) Describe the following:
i) Raster Data ii) Vector Data
(b) Explain the functions of GIS. What are the applications of GIS?

7. Attempt any *one* part of the following: 7 x 1 = 7

(a) Explain the functional segments of GPS.
(b) Explain the working principle of DCPS