MGIS–07

Advance GIS and RS

Master of Geographical Information System
(MGIS–11/16/17)
Second Year, Examination, 2018

Time : 3 Hours **Max. Marks : 80**

Note : This paper is of **eighty (80)** marks containing **three (03)** Sections A, B and C. Learners are required to attempt the questions contained in these Sections according to the detailed instructions given therein.

Section–A

(Long Answer Type Questions)

Note : Section 'A' contains four (04) long answer type questions of nineteen (19) marks each. Learners are required to answer *two* (02) questions only.

1. What do you mean by Microwave remote sensing ? In what way it is different from passive remote sensing ? Explain about its applications in resource mapping.

2. What is meant by Landuse/Land cover ? How can a landuse land cover map can be prepared using supervised classification approach ?

3. What is GIS ? Is it different from web enabled GIS ? What way web enabled GIS can be used for geospatial modelling ?

4. What is LIDAR ? Is it different from SAR ? Explain the utility of LIDAR in forestry.

Section–B

(Short Answer Type Questions)

Note : Section 'B' contains eight (08) short answer type questions of eight (08) marks each. Learners are required to answer *four* (04) questions only.

1. Thermal Remote Sensing.
2. Navigation systems.
3. 3D GIS
4. SAR Applications.
5. National spatial data infrastructure.
6. Importance of Hyperspectral remote sensing.
7. Spectral image enhancements.
8. Geospatial modelling.

Section–C

(Objective Type Questions)

Note : Section 'C' contains ten (10) objective type questions of one (01) mark each. All the questions of this Section are compulsory.

1. MODIS Satellite provides :

    (a) Moderate resolution images

    (b) Temporal resolution of 1-2 days

    (c) Hyperspectral remote sensing data

    (d) All are correct

2. Which of these is a Microwave remote sensing satellite ?

    (a) Resourcesat 1

    (b) Thematic Mapper

    (c) RISAT

    (d) SPOT

3. ERDAS Imagine is a :
   (a) Image Processing Software
   (b) GIS Software
   (c) Both (a) and (b)
   (d) None of the above

4. NDVI Value of dense vegetation areas raneges between :
   (a) less than 0.2
   (b) 0.2 to 0.4
   (c) 0.4 to 0.6
   (d) 0.6 to 1

5. SAR interferometry technique is used for :
   (a) Volume of Forest stand
   (b) Making Highly accurate digital elevation model
   (c) Making High resolution maps
   (d) All of the above

6. Geospatial Modelling requires :
   (a) Remote sensing based data
   (b) Geo-referenced data
   (c) Digital data in grid format
   (d) 2-Dimensional optical data

7. Microwave remote sensing is :
   (a) Having all weather capability
   (b) Having wide spectral bands
   (c) Having narrow spectral bands
   (d) None of these

8. Data input methods for GIS analysis of remote sensing data is :

   (a) Through scanning and digitisation

   (b) On screen digitisation

   (c) Manual digitization using digitization table and mouse

   (d) All of the above

9. In supervised classification :

   (a) Training sets are not required for landuse classification

   (b) Training sets are required for classifying different classes

   (c) Training sets are important for vegetation indices

   (d) All are true

10. Urban planning and design can be best done using :

    (a) 2D GIS

    (b) 3D GIS

    (c) OS-GEO

    (d) OC-GIS