MGIS–07

Advance GIS & 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 understand by Hyperspectral Remote Sensing ? Explain its importance with reference to vegetation.

2. What do you mean by Geospatial modeling ? Briefly explain its advantages in resource management.

3. What do you mean by Spectral ratioing ? Explain the advantages of vegetation indices.

4. What is Open GIS ? Give some examples of open source GIS and explain web enabled GIS based mapping.

Section–B

(Short Answer Type Questions)

Note : Section 'B' contains eight (08) short answer type questions of eight (8) marks each. Learners are required to answer *four* (04) questions only.

1. Spatial and Non-spatial data
2. Global Positioning System
3. Principal Component Analysis
4. Thermal remote sensing
5. LIDAR Applications
6. Concept of 3D GIS
7. Spectral ratioing
8. Advantages of Microwave remote sensing

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. Multicriteria decision-making (MCDM) is :

    (a)　Used for making maps

    (b)　Used for area analysis

    (c)　Used for Geospatial modeling

    (d)　Used for removing shadows

2. Thermal data is useful for :

    (a)　Burnt area mapping

    (b)　Landuse land cover mapping

    (c)　Active fire mapping

    (d)　All of the above

3. Hyperspectral sensors provides information in :

   (a) optical spectral bands

   (b) narrow spectral bands

   (c) wide spectral hands

   (d) All of the above

4. Which of the satellite is suitable for large scale mapping ?

   (a) MODIS

   (b) Cartosat

   (c) RISAT

   (d) IRNSS

5. OSGeo is :

   (a) Open Source GIS

   (b) Open Source Multicriteria geospatial modeling

   (c) Open Source Geospatial Foundation

   (d) Open Source Geographical Union

6. Geo-spatial Modeling requires :

   (a) Remote sensing based data

   (b) Digital data in grid format

   (c) Geo-referenced data

   (d) 2-Dimensional optical data

7. Sliver polygons are formed due to :

   (a) Small areas resulting from spatial overlays

   (b) Small areas resulting from Grid based analysis methods

   (c) Small areas resulting from Non-Spatial and spatial data intersection

   (d) Interpolation of contour lines while DEM generation

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

   (a) Through scanning and digitization

   (b) On screen digitization

   (c) Manual digitization using digitization table and mouse

   (d) All of the above

9. LIDAR is :

   (a) Optical Remote Sensing Method

   (b) Themal Remote Sensing

   (c) Active Remote Sensing Method

   (d) Passive Remote Sensing Method

10. Which of the satellite are used for landuse land cover mapping ?

   (a) LISS III

   (b) LISS IV

   (c) Resourcesat

   (d) All of the above