

# **MGIS-07**

## **Advance GIS & RS**

Master of Geographical Information System (MGIS-11/16/17)

Second Year Examination, 2019 (June)

**Time : 3 Hours]**

**Max. Marks : 80**

**Note :** This paper is of Eighty (80) marks divided into three (03) sections A, B and C. 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 any two (02) questions only.

(2×19=38)

1. What is Microwave remote sensing? How it is different from Hyperspectral Remote Sensing? Explain the importance of microwave data.

2. What do you mean by Geospatial modeling? Briefly explain its advantages in resource management.
3. What do you mean by Contrast stretching? How it is different from principal component analysis?
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 (08) marks each. Learners are required to answer any four (04) questions only. (4×8=32)

1. Concept of NSDI
2. Difference between GIS & Global Positioning System.
3. SAR Applications
4. Thermal remote sensing.
5. LIDAR Applications

6. Concept of 3D GIS.
7. Vegetation indices.
8. Spatial and Non spatial data

### **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. (10×1=10)

1. Multi criteria decision making (MCDM) is
  - (a) Used for making maps
  - (b) Used for area analysis
  - (c) Used for Geo spatial modeling
  - (d) Used for removing shadows.

2. Thermal data is useful for
- (a) Burnt area mapping
  - (b) Land use land cover mapping
  - (c) Active fire mapping
  - (d) All of these.
3. Hyperspectral sensors provides information in
- (a) optical spectral bands
  - (b) narrow spectral bands
  - (c) wide spectral bands
  - (d) All of these.
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 multi criteria 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 digitisation
- (b) on screen digitisation
- (c) manual digitiazation using digitization table and mouse
- (d) All the above

**9.** LIDAR is

- (a) optical remote sensing method
- (b) thermal remote sensing
- (c) active remote sensing method
- (d) passive remote sensing method

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

(a) LISS III

(b) LISS IV

(c) Resourcesat

(d) All the above

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