

Roll No. ....

## **MGIS–03/PGDGIS–03/CGIS–03**

### **Remote Sensing and GPS**

Master of Geographical Information System/Post  
Graduate Diploma in Geographical Information  
System/Certificate in Geographical Information  
System (MGIS/PGDGIS/CGIS–11/16)

First Year/First Semester, Examination, 2017

**Time : 3 Hours**

**Max. Marks : 70**

**Note :** This paper is of **seventy (70)** 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 fifteen (15) marks each. Learners are required to answer *two* (02) questions only.

1. What is remote sensing ? Explain the concept and principles of remote sensing.
2. Explain the Meteorological Satellites—INSAT, NOAA, GOES.
3. How does GPS work and what are the applications of GPS ?
4. Explain the atmospheric interaction with electromagnetic radiation.

## Section-B

### (Short Answer Type Questions)

**Note :** Section 'B' contains eight (08) short answer type questions of five (05) marks each. Learners are required to answer *six* (06) questions only.

1. Discuss the role of atmospheric window in remote sensing.
2. Explain Active and Passive remote sensing.
3. Which type of resolution is characterized by the wavelength ? Explain briefly.
4. How many satellites are needed by a GPS in a 3D space ?
5. Explain the term Radar sat.
6. What is the difference between a satellite, sensor and platform ?
7. Define Swath and Nadir.
8. What are the characteristics of land satellites ?

## 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.

Fill in the blanks :

1. The frequency of visible light ranges from a high of .....  $\mu\text{m}$  to a low of .....  $\mu\text{m}$ .
2. .... sensors monitor only the natural solar reflected light or electromagnetic energy from an object.
3. .... resolution is the sensitivity of a sensor to respond to a specific frequency range.

4. Some systems ..... create a route and give turn by turn directions.
5. The ..... geometry is also relevant when the receiver is used in vehicles.

Write True *or* False :

6. The Sun provides a very convenient source of energy for remote sensing.
7. The GOES system of satellites provides most of the remotely sensed weather information for North America.
8. The first satellite was placed in orbit on 22 February, 1980.
9. The first GPS Satellite was launched in 1978.
10. The longest visible wavelength is blue.

