 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–11/16/17)

First Year/First Semester, Examination, 2017

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

Note : This paper is of **eighty (80)** marks containing **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 *two* (02) questions only.

1. Write down the detailed procedure for visual interpretation of satellite image and explain interpretation key characteristics.
2. Give a detailed specification and characteristics on meteorological satellites.

3. Explain in details about SLAR and their advantages. Also write the importance of radar principle in microwave remote sensing.
4. What are waves ? Explain about longitudinal and transverse waves. Also write the notes on frequency of and write the wave equation.

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. Why is image classification necessary ?
2. What are the types of image interpretation ?
3. Describe an image with its properties.
4. Discuss the principle of radar.
5. Define Atmospheric window.
6. Draw a spectral signature curve for soil, water and vegetation.
7. What is electromagnetic spectrum ?
8. Differentiate active sensor and passive sensor.

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.

Choose the correct answer :

1. The most widely used antenna in GPS is :
   (a) Paraboloid antenna

(b) Microstrip antenna

(c) Horn antenna

(d) Slotted antenna

2. The refractive index of the ocean water :

(a) increases with salinity

(b) increases with temperature

(c) decreases with salinity

(d) decreases with temperature

3. Remote sensing technique makes use of the properties of ..... emitted, reflected or diffracted by the sensed.

(a) Electric waves

(b) Sound waves

(c) Electromagnetic waves

(d) Wind waves

4. Which one of the following frequency regions is a part of Sun's radiation ?

(a) Ultraviolet frequency region

(b) Visible frequency region

(c) Infrared frequency region

(d) Radio frequency region

(e) All of these

5. A black body :

(a) Is a diffuse emitter

(b) Absorbs all the radiations of every wavelength

(c) Emits power of every wavelength

(d) All of the above

Write true *or* false :

6. Legends are not associated with digital maps.

7. The maximum suns radiation occurs around 0.55 μ wavelength.

8. The code based GPS receivers are generally used for vehicle tracking.

9. The infrared portion of EMR lies between 0.4-0.7 μm.

10. Orbital radius of GPS satellites is approximately 18,400 km.