MBR-003-1074007 Seat No. _____

M. C. A. (Sem. IV) Examination

April / May - 2018

E4053 : GIS, GPS & Remote Sensing

Faculty Code : 003
Subject Code : 1074007

Time : Hours] [Total Marks : **70**

1 (a) Answer the following : **4**

(1) Give full form of GIS.

(2) _____ data is used to represent linear features.

(3) In GIS, vector data is split into 3 types : point, line and polygons. True or False ?

(4) Spatial data are of two types, vector and raster. True or False ?

(b) Answer any one in brief : **2**

(1) What is GIS ?

(2) What is spatial concept in GIS ?

(c) Answer any one in detail : **3**

(1) Explain types of information in a Digital Map.

(2) Explain 3D analysis.

(d) Answer any one : **5**

(1) How to display and querying GIS data ?

(2) How GIS can be used in Population analysis and prediction ?

2 (a) Answer the following : **4**

(1) Give full form of GPS.

(2) Each _____ broadcast radio signals with their location, statues and precise time information.

(3) The space segment is composed of the orbiting GPS satellites, or space vehicles. True or False ?

(4) User segment is one of the segments in GPS. True or False ?

(b) Answer any one in brief : **2**

(1) What is absolute positioning in GPS ?

(2) What is relative positioning in GPS ?

(c) Answer any one in detail : **3**

(1) How GPS works ?

(2) Explain Kinematics GPS.

(d) Answer any one : **5**

(1) Write a note on differential GPS.

(2) List and explain components of GPS.

3 (a) Answer the following : **4**

(1) Give full form of UTM.

(2) What is Datum ?

(3) What is GPS receiver ?

(4) What is the real use of GPS ?

(b) Answer any one in brief : **2**

(1) What is the future of GPS technology ?

(2) What is the use of surveying receiver ?

(c) Answer any one in detail : **3**

(1) Write a note on GPS applications.

(2) Discuss factors that affect GPS.

(d) Answer any one : **5**

(1) How GPS receiver works ?

(2) How to compute coordinates in GPS ?

4 (a) Answer the following : **4**

(1) _____ describes how much detail in a photographic image is visible to the human eye.

(2) _____ measure the surface temperature and thermal properties of targets.

(3) The path followed by a satellite is referred to as its orbit. True or False ?

(4) The area imaged on the surface, is referred to as the _____.

(b) Answer any one in brief : **2**

(1) What is Remote Sensing ?

(2) What is Electromagnetic Radiation ?

(c) Answer any one in detail : **3**

(1) Differentiate Active *vs.* Passive sensing.

(2) Explain temporal resolution.

(d) Answer any one : **5**

(1) How Remote Sensing works ?

(2) Write a note on Spectral Resolution and Radiometric Resolution.

5 (a) Answer the following : **4**

(1) Give full form of DEM.

(2) Give full form of DTM.

(3) _____ involves the combining or merging of data from multiple sources in an effort to extract better and/or more information.

(4) Image transformations typically involve the manipulation of multiple bands of data, whether from a single multispectral image or from two or more images of the same area acquired at different times. True or False ?

(b) Answer any one in brief : **2**

(1) What is supervised classification ?

(2) What is data integration ?

(c) Answer any one in detail : **3**

(1) Explain Image Enhancement.

(2) List elements of Visual Interpretation and explain any one.

(d) Answer any one : **5**

(1) How Remote Sensing is useful in Agriculture ?

(2) Explain Digital Image processing.
