POST GRADUATE CERTIFICATE IN GEOINFORMATICS (PGCGI)

Term-End Examination

June, 2022

MGY-003 : GLOBAL NAVIGATION SATELLITE SYSTEM AND GEOGRAPHIC INFORMATION SYSTEM

Time : 2 hours *Maximum Marks : 50*

Note : ***All*** *questions are* ***compulsory****. Internal choices are given in questions no. 2 to 4. The marks for each question are indicated against it.*

1. Answer ***all*** parts :

(a) Fill in the blanks with the appropriate word(s) : *3×1=3*

(i) The _____ is an array of uniformly spaced elevation data.

(ii) _____ is a measurement of direction between two points measured clockwise from North.

(iii) _____ is a network of radio-emitting satellites deployed by the US Department of Defense.

(b) State whether the following statements are *True (T)* or *False (F)* : *3×1=3*

(i) Digital Terrain Model is a land surface represented in digital form by an elevation grid or lists of three-dimensional co-ordinates.

(ii) Trilateration is a raster operation.

(iii) RINEX and NMEA are the formats of GPS data.

(c) Match the items given in Column A with those given in Column B : *4×1=4*

Column A	*Column B*
(i) Raster data structure	(1) Heights in digital format
(ii) Overlay	(2) Quadtree
(iii) GLONASS	(3) Intersection
(iv) Triangulated Irregular Network	(4) Russia

2. Write short notes on any ***four*** of the following : *4×5=20*

(a) GPS Signal Structure

(b) Components of GIS

(c) Spiral GIS Design Model

(d) Cartographic Output

(e) Raster to Vector Data Conversion

(f) Types of Database

(g) Topological Model

3. (a) What is Georeferencing ? Discuss briefly the steps involved in georeferencing. *5*

(b) Explain briefly the methods of raster data input. Add a note on the terms related to processes that improve image quality. *5*

OR

(a) Explain the advantages and disadvantages of vector data models. *5*

(b) Describe briefly the spatial decision support system. *5*

4. (a) Discuss briefly any five applications of GPS. *5*

(b) GIS is both a Science and a Technology. Justify. *5*

OR

(a) Differentiate between Relational and Hierarchical database models. *5*

(b) Explain the sources of errors in GPS observation. *5*