MGY-003

POST GRADUATE CERTIFICATE IN GEOINFORMATICS (PGCGI)

Term-End Examination

December, 2021

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

Time : 2 Hours   *Maximum Marks : 50*

Note : *(i)   All questions are* ***compulsory***.

(ii)   Internal choices are given in question nos. ***2 to 4***.

(iii)   The marks for each question are indicated against it.

1.   Answer all parts :

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

(i)   Connectivity is a .... relationship that enables arcs to connect to each other through nodes.

P. T. O.

(ii)   .... is a measure of the width of a spectrum of a signal.

(iii)   .... is the European Union's global navigation satellite system.

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

(i)   Isarithms is a line drawn on a map connecting points having different numerical values of same variable.

(ii)   Metadata is a data about data set.

(iii)   Geospatial data depicts the real world in two basic models, object based model and field based model.

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

Column A		Column B
(i) Vector data	(1)	Russia
(ii) CAD Package	(2)	Spaghetti Model
(iii) Kriging	(3)	Drawing Exchange Format
(iv) GLONASS	(4)	Statistical Technique

2. Write short notes on any *four* of the following :

4×5=20

(a) GPS Navigation *vs.* GPS Surveying

(b) Data consistency

(c) Waterfall model of system life cycle

(d) GPS segments

(e) Non-cartographic outputs

(f) Georeferencing

(g) Database creation

3. (a) What is differential GPS ? Add a note on the sources of errors in GPS observation. 5

(b) Describe the GPS signal structure.   5

Or

(a) Discuss in detail the overlay operations. 5

(b) Describe in brief about *four* types of GIS outputs.   5

4. (a) Explain the elements of GPS survey planning process.   5

(b) Discuss about topological models on the basis of their characteristics and function.

5

Or

(a) Explain the process of map digitisation.   5

(b) Describe the advantages and dis-advantages of raster data models.   5

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