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MGY–003

POST GRADUATE CERTIFICATE IN GEOINFORMATICS (PGCGI)

Term-End Examination

June, 2026

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 : 4×1=4

   (a) Fill in the blank spaces with appropriate word(s) :

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

(ii) In static survey the receiver placed on a point with known coordinates is known as .....

(iii) The data organized by records on a parent-child one-many relations is known as .....

(iv) ..... is the geographical concept where areal features are continuous.

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

(i) Almanac data contains the approximate positions of the satellite.

(ii) Metadata is the data about data and is prepared mostly in the form of XML during the time of data production.

(c) Match the items given in Column A with those in Column B : 3×1=3

Column A	Column B
(i) DGPS	(1) Result based on known input
(ii) Deterministic model	(2) Control or reference receiver
(iii) Geospatial metadata	(3) Coordinate information

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

(a) Components of GIS design

(b) Non-cartographic outputs

(c) Georeferencing

(d) Types of database

(e) Database creation

(f) Sources of errors in DGPS

3. (a) Discuss briefly the elements of GPS survey planning process. 5

(b) What is data quality ? Explain the data quality issues. 5

Or

(a) Describe briefly the static and rapid static GPS measuring techniques. 5

(b) Discuss the GIS information products based on the nature of organization, its goals and experience with the system. 5

4. What is topological modelling ? Discuss different topological models giving suitable examples. 10

Or

Discuss in detail raster and vector data structures with the help of neat well-labelled diagrams.

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