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**MGY-003**

**POST GRADUATE CERTIFICATE IN  
GEOINFORMATICS**

**(PGCGI)**

**Term-End Examination**

**December, 2025**

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

*Time : 2 Hours*

*Maximum Marks : 50*

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**Note :** *All questions are compulsory. Internal choices are given in question numbers 2 to 4. The marks of each question are indicated against it.*

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1. Answer all parts :

- (a) Fill in the blank spaces with appropriate word(s) : 4×1=4
  - (i) USA developed and deployed first satellite based navigation system known as .....

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- (ii) The tool to extract data from database and present in a useful manner is known as .....  
..... .
- (iii) ..... is the European Union radio navigation programme launched by European Commission.
- (iv) ..... is a non-uniform adjustment of a dataset based on the movements of known control points to few locations.
- (b) State if the following statements are True (T) or False (F) :  $3 \times 1 = 3$
- (i) The Digital Elevation Model (DEM) consists of an array of uniformly spaced elevation data.
- (ii) Dithering refers to providing full accuracy of GPS to civilian and hostile powers.
- (iii) Shape file comprises points (a pair of X, Y, Z-coordinates), lines (series of points) and polygons.

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

| Column A              | Column B                      |
|-----------------------|-------------------------------|
| (i) Raster Data       | (1) Russian federation        |
| (ii) GLONASS          | (2) Adding new fields of data |
| (iii) Interactive GIS | (3) Grid                      |

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

- (a) Cartographic outputs
- (b) Geoinformatics products
- (c) Elements of GPS Survey
- (d) Differential GPS
- (e) Components of GIS
- (f) Area definition and contiguity

3. (a) What is Data Linkage ? Discuss in brief the types of data linkages. 5
- (b) Explain the concept of topology. Discuss in brief the important components of topology. 5

*Or*

- (a) Differentiate briefly between the relational and hierarchical database models. 5
- (b) Explain the advantages and disadvantages of raster and vector GIS models. 5
4. Discuss in detail the applications of GPS. Give examples, wherever required. 10

*Or*

Describe in detail the various operations in raster and vector analysis. 10

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