

**POST GRADUATE CERTIFICATE IN
GEOINFORMATICS (PGCGI)**

Term-End Examination

June, 2021

**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 question nos. 2 to 4. The marks for each question are indicated against it.*

1. Answer **all** parts :

- (a) Fill in the blank spaces with appropriate word(s) : $4 \times 1 = 4$
- (i) _____ is a process to bring various GIS data or spatial information together into single platform of coverage, reference system or format.
- (ii) Errors which occur during data entry and manipulation are known as _____ .
- (iii) Device used for scanning an image and converting it into numerical format is known as _____ .

(iv) _____ is a land surface represented in digital form by an elevation grid of three-dimensional coordinates.

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

(i) Fundamental components of spatial data in a GIS are points, lines and polygons.

(ii) Precision means closeness between digital database and real world values.

(iii) Map projection is a device for representing all or part of a rounded surface on a flat sheet.

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

Column A

Column B

(i) Digitiser (1) Positional and attribute

(ii) Data Accuracy (2) AutoCAD

(iii) Drawing Exchange Format (3) Vectorisation

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

- (a) Sources of errors in DGPS
- (b) Applications of GPS
- (c) Types of database
- (d) Vector data input
- (e) Area definition and contiguity
- (f) Spatial objects
- (g) GIS information products

3. Discuss in detail various database models. 10

OR

Explain the segments and principles of GPS operation, giving figures. 10

4. Discuss the raster data structure. Draw a neat well-labelled diagram. 10

OR

Discuss in detail the five components of GIS. 10
