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MGY-003

POST GRADUATE CERTIFICATE IN GEOINFORMATICS (PGCGI)

Term-End Examination

December, 2019

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 no. 2 to 4.

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

1. Answer **all** parts : 4x1=4

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

(i) RTK stands for _____ which uses a radio data link to transmit satellite data from Reference to Rover.

(ii) _____ is an international industry consortium with companies, government agencies and universities participating to develop publicly available open source GIS Software.

(iii) _____ is the process of transformation of spatial and non-spatial data from one form to another.

(iv) _____ means the flexible mobility of GIS database in terms of its usage where it can be opened and analysed in any Software by any GIS professional.

(b) State if the following statements are **True (T)** or **False (F)** : 3x1=3

(i) Height of instrument (HI) refers to the correct measurement of the distance of the GPS antenna above the reference mounted over which it has been placed.

(ii) Database Management refers to GIS capability to collect, store, analyse and provide access to data.

(iii) Vector to raster conversion is the process in which entire vector data is converted into an array of cells with corresponding attribute data attached to it.

(c) Match the items in Column - A with those in Column - B : 3x1=3

	Column - A		Column - B
(i)	Network analysis	(1)	GRASS
(ii)	GIS software	(2)	Drum plotter
(iii)	Hard copy	(3)	Shortest path

2. Write short notes on **any four** of the following : 4x5=20

(a) Components of GNSS

(b) Sources of errors in DGPS

(c) Types of database

(d) Georeferencing

(e) Area contiguity

(f) Data accuracy

(g) Data integration

3. Elaborately explain the principle of GPS operation. Draw neat well labelled diagrams to support your answer. 10

OR

Discuss the advantages and disadvantages of raster and vector data models. 10

4. Give a brief account of the components of GIS design. 10

OR

Discuss in brief the various operations involved in raster data analysis. Give neat well labelled diagrams wherever required. 10