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SARDAR PATEL UNIVERSITY

SEMESTER – I, M.Sc. (Geoinformatics)

EXTERNAL EXAMINATION (October 2016)

PS01CGIN02 (Principles of Geographical Information System)

Date: 28-10-2016

Marks: 70

Time: 10:00 am to 01:00 pm

Q.1 Answer all questions

(8 Marks)

- (1) Two points separated by 5 mm in 1:10,000 scale map are separated by ----- meters on Earth
- a. 5 b. 50 c. 500 d. 50000
- (2) Components of GIS are -----
- a. 5 b. 3 c. 4 d. 6
- (3) Data about GIS data is called -----
- a. Scale Data b. Metadata c. Projection Data d. Symbol Data
- (4) Two overlapping polygons of spaghetti data after topology building will generate ----- records in database
- a. 3 b. 2 c. 4 d. 1
- (5) OGC is short form of _____
- a. Open Geospatial Consortium b. Open GIS Committee c. Open GIS concept d. All a,b,c
- (6) Most difficult error to detect is ----- error
- a. Scale b. Attributes c. Entity d. Logical
- (7) GIS surface is defined as GIS raster + _____
- a. Pressure b. Elevation c. precipitation d. All a, b, c
- (8) GPS coordinates are in which of the following datum
- a. NAD 27 b. WGS 84 c. EVEREST 1956 d. NAD 83

Q.2 Answer any seven questions

(14 Marks)

1. Enlist four major characteristic of primary and secondary data
2. Define GIS and only name four Ms function of GIS

3. Explain variable buffer function using line data
4. Write only names of six fundamental data layers of GIS data repository
5. Define Tuple, CAD, Topology, Cadastre
6. List four major advantage of adopting GIS standards
7. Explain map scale and three characteristics of large and small scale map
8. Briefly explain Mobile GIS system
9. Draw information system taxonomy diagram

Q.3 (a) Describe GIS raster and vector data model (6 Marks)

(b) Explain major GIS data errors and quality parameters (6 Marks)

OR

(b) Write a note on GIS data sources (6 Marks)

Q.4 (a) Explain basic differences between map and GIS (6 Marks)

(b) Explain map projection, types of map projection and projection errors (6 Marks)

OR

(b) Explain GIS attributes measurement levels using example of line feature (6 Marks)

Q.5 (a) Explain application of GIS in drought disaster management (6 Marks)

(b) What is thin, medium and thick client implementation of Web GIS? (6 Marks)

OR

(b) Draw polygon layer and explain classification and reclassification (6 Marks)

Q.6 (a) Describe OGC standard and its various services (6 Marks)

(b) Explain polygon – polygon overlay function and geometry as well as attributes of output layer (6 Marks)

OR

(b) Write a note on application of GIS in e-governance (6 Marks)

