

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA– SEMESTER –V EXAMINATION –SUMMER-2019

Subject Code:2650013

Date: 10-05-2019

Subject Name: Geographical Information System

Time:10.30 am to 1.00 pm

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a)** Answer the following questions briefly: **07**
1. What is use of GPS?
 2. _____ is the single most important vector-format input device for GIS.
 3. What is Aerial Photography?
 4. Define Remote Sensing.
 5. False nodes are also called _____.
 6. How can you convert a value from 'Degree, Minute, Second (DMS)' system to 'Decimal Degree (DD)' system?
 7. What is an isoline?
- (b)** Explain any four methods of Raster data input. Explain any three methods of compact storing of Raster data. **07**
- Q.2 (a)** List and briefly explain any seven differences between Primary Data and Secondary Data. **07**
- (b)** What is 'temporal data'? Describe dimensionality and use of each of Point, Line and Area in GIS. **07**
- OR**
- (b)** Explain the UTM/UPS process. **07**
- Q.3 (a)** List and explain the seven basic categories of metadata. **07**
- (b)** Justify 'Leakage of gas in a city' as an example of both polygon-over-polygon overlay and point-in-polygon overlay. **07**
- OR**
- Q.3 (a)** What is trapezoidal rule? Describe the three types of each of Centroid and Region. **07**
- (b)** List and explain any seven types of buffers. **07**
- Q.4 (a)** Why 'classification' in GIS is called 're-classification'? Explain the working and use of the three types of filters in GIS. **07**
- (b)** How can you measure a polygon? **07**
- OR**
- Q.4 (a)** What is interpolation? With an example of each, explain types of interpolation. **07**
- (b)** Explain the use of alpha-index and gamma-index for calculating connectivity. **07**
- Q.5 (a)** Briefly describe the Design Process. Explain any four map design controls. **07**
- (b)** Explain the process of Conceptual Data Modeling for drawing Entity Relationship Diagram for a GIS. **07**
- OR**
- Q.5 (a)** Give any two uses and any six examples of non-cartographic output. **07**
- (b)** What is JAD? List and explain any seven advantages of JAD. **07**
