## Code No. : 41015 GI

## VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD B.E. (Civil Engg.) IV Year I-Semester Main Examinations, December-2017

## Geoinformatics

Time: 3 hours

Max. Marks: 70

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Part-A  $(10 \times 2 = 20 \text{ Marks})$ 

- 1. Define Cartography.
- 2. Discuss the advantages of GIS.
- 3. Differentiate between Personal and File Geodatabase.
- 4. What is DMBS?
- 5. Briefly explain the uses of Digital Elevation Model.
- 6. List any two municipal applications of GIS.
- 7. Define Remote Sensing.
- 8. What do you mean by 'Atmospheric scattering'?
- 9. List out various types of GPS errors.
- 10. What is point positioning in GPS?

## Part-B (5 x 10=50 Marks) (All bits carry equal marks)

- 11. a) Explain the importance of Geoinformatics from Civil Engineering point of view. Indicate one example with a flow chart.
  - b) Discuss the 4M concept used in GIS.
- 12. a) Discuss the various types of data inputs to GIS.
  - b) Discuss any two types of data structures used in GIS.
- 13. a) List out and explain the analysis functions used in rastar based overlay operation of GIS.
  - b) Explain in detail about the application of GIS in water resources engineering with a flow chart
- 14. a) Explain about *i*) Geo Synchronous satellites *ii*) Passive Remote Sensing
  - b) Define relief displacement or Height distortion, indicate how it is used in finding the height of an object with a suitable example.
- 15. a) Explain the importance of selective availability (SA) and anti-spoofing with respect to intentional degradation of GPS signals.
  - b) Discuss the various segments of Global Positioning System.
- 16. a) Define map projection and explain in detail about different types of map projections used in GIS.
  - b) List out the data formats used in GIS and explain in detail with neat figures.
- 17. Answer any *two* of the following:
  - a) Explain the errors in various stages of GIS.
  - b) Discuss the various elements of Visual Interpretation techniques.
  - c) Differentiate between Space and Ground based augmentation systems.