Hall Ticket Number:

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 × 2 = 20 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.

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