Total No. of Questions :12]

SEAT No. :

P2828

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B.E. (I.T.)

GEO INFORMATICS SYSTEMS

(2008 Course) (Semester - II) (Elective - IV)

Time : 3 Hours] *[Max. Marks :100*

Instructions to the candidates:

1) ***Answer to the two sections should be written in separate answer books.***
2) ***From Section I answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6 and from section II answer Q.7 or Q.8, Q.9 or Q.10, Q.11 or Q.12.***
3) ***Neat diagrams must be drawn wherever necessary.***
4) ***Figures to the right indicate full marks.***

SECTION-I

Q1) a) Explain radiometric correction methods. What is the significance of applying various correction methods to remotely sensed images. **[8]**

b) Explain in brief various applications of arial photo interpretation. **[10]**

OR

Q2) a) Explain image interpretation strategy. **[4]**

b) 'Image interpretation keys provide valuable training aids for novice interpreters', justify. **[6]**

c) Explain in detail image transformations in image processing of remotely sensed data. **[8]**

Q3) a) What is surface roughness? Explain the radar scattering mechanism due to different types of scattering. **[8]**

b) Explain SLAR systems with suitable diagrams. **[8]**

OR

P.T.O.

Q4) a) Explain imaging sensor systems classification. **[6]**

b) What are the orbital characteristics of satellites? Name them. **[6]**

c) Explain the atmospheric properties significant in the remote sensing process. **[4]**

Q5) a) Write a note on geographic co-ordinate system. Give one example for geographic co-ordinates. **[4]**

b) What is the importance of remote sensing, GIS, GPS and related technologies in your day-to-day life as an IT engineer? Explain. **[6]**

c) List the data manipulation and analysis operations pertaining to GIS workflow. **[6]**

OR

Q6) a) Assume a general purpose technology for handling geographic data in digital form. What specific needs must be addressed? For such a system describe the information flow with suitable diagram. **[8]**

b) Elaborate on the essential preprocessing procedures. What are the essential elements that a GIS must contain? **[8]**

SECTION-II

Q7) a) What are the various ways and means to collect new data for a GIS application? Explain in brief. **[8]**

b) Elaborate various sources of the data errors in GIS. **[8]**

OR

Q8) a) What is Data cleaning process in GIS? Explain in brief. **[8]**

b) What are map to map and image to map transformations? Explain in brief. **[8]**

Q9) a) How will you model a hospital, a road and a national park in GIS? Justify your model with reason. **[6]**

b) How will you model a mall using raster data representation in GIS? Explain in brief. **[6]**

c) What is Binary model of GIS? Explain in brief. **[6]**

OR

Q10)a) How will you model a mall using vector data representation in GIS? Explain in brief. **[6]**

b) What is spatial and atrribute queries in GIS? Explain in brief. **[6]**

c) What is Index model of GIS? Explain in brief. **[6]**

Q11)a) What is the role of GIS in urban management? Explain in brief. **[8]**

b) How is GIS used in land use or land cover classification? **[8]**

OR

Q12)a) Describe any two applications of GIS in brief. **[8]**

b) Take an application of enhancing railway line outreach and explain how GIS can be useful for that. **[8]**

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