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B.E. (Information Technology)
c:GEO INFORMATICS SYSTEM
(2008 Pattern) (Semester - II) (Elective - IV)

Time : 3 Hours]   *[Max. Marks : 100*
Instructions to the candidates:
    1)   *Draw neat diagram wherever necessary.*
    2)   *Assume suitable data, if necessary.*
    3)   *Figures to the right indicate full marks.*

SECTION - I

Q1) a)   Explain visual image interpretation? Explain all basic elements of image interpretation with example. **[8]**

    b)   What are the different types of errors? Explain all methods used for correcting errors from digital images? **[8]**

OR

Q2) a)   Explain the process of image enhancement in digital image processing? Explain with example the importance of preprocessing? **[8]**

    b)   Explain any four basic elements of image interpretation. **[8]**

Q3) a)   Explain remote sensing and its types? Explain in detail the steps involved in remote sensing with example? **[9]**

    b)   Explain in detail the RADAR principle with equation? State the use of RADARs in remote sensing? **[9]**

OR

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Q4) a) Explain SAR and SLAR with suitable diagram. **[9]**

b) What are the different types of sensor parameters? Describe them. **[9]**

Q5) a) Explain in detail the architecture of GIS? On which factors geographic integration of information can be done? **[8]**

b) What is map projection and its types? Explain the type's maps which can be produced by using GIS? **[8]**

OR

Q6) a) Explain fundamental operations of GIS and theoretical framework of GIS along with diagram? **[8]**

b) Explain what is the M's of GIS? List and explain reasons for using computer in the process of making map? **[8]**

SECTION - II

Q7) a) What do you mean by Geospatial database? Explain the importance of digital database. **[8]**

b) What are the common errors in GIS data bases? How can they be prevented or corrected? **[8]**

OR

Q8) a) What is the significance of GIS data modeling? Explain the stages in creating GIS data model with suitable diagram. **[8]**

b) Explain spatial data model? Consider any spatial information and represent its features using types of spatial data model. **[8]**

Q9) a) Explain the types of data involved in GIS? Explain buffering with example.
[8]

b) What is overlay analysis? Describe the process of digital terrain modeling.
[8]

OR

*Q10)*a) What are the types of raster GIS models? Describe any two. **[8]**

b) Explain Binary and Index Model with suitable example. **[8]**

*Q11)*a) Describe the software scenario in GIS focusing on functionalities, products and developers. **[8]**

b) What is the role of GIS in urban management? Explain in brief? **[5]**

c) Explain types of queries in GIS. **[5]**

OR

*Q12)*a) Take an application of drainage system in Pune city and explain how GIS can be useful for that? **[5]**

b) What is the role of GIS in municipal management? Explain in brief? **[5]**

c) Explain in detail objectives of design of GIS? How this will ensure the effectiveness of GIS? **[8]**

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