

M. SC. (GEOINFORMATICS) SEM-III (CBCS) (2013 COURSE) :
SUMMER - 2018
SUBJECT : SPATIAL ANALYSIS & MODELING

Day : **Tuesday** Time : **02.00 PM TO 05.00 PM**
Date : **17/04/2018** **S-2018-1117** Max. Marks : 60

N.B.:

- 1) Attempt **ANY FIVE** questions.
 - 2) Figures to the right indicate **FULL** marks.
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Q.1 Answer the following in detail: [12]

- a) What is spatial autocorrelation?
- b) What is nearest neighbor analysis? Give real life examples from environmental and climatic studies.

Q.2 Answer the following in detail: [12]

- a) What is a DEM? How slope calculations are different from calculating aspect?
- b) What is Hill shade? How it can help us in analyzing DEM?

Q.3 Answer the following in detail: [12]

- a) What is Semivariogram in terms of Range, sill and nugget?
- b) What is Simple Kriging? How it is different from Universal Kriging?

Q.4 Answer the following in detail: [12]

- a) Outline the GIS Modeling Process. Explain briefly each possible step and its significance.
- b) What are the differences between logical regression and linear regression models?

Q.5 Answer the following in detail: [12]

- a) Explain with examples path analysis using raster data.
- b) Explain difference between raster and TIN.

Q.6 Write short notes on **ANY THREE** of the following: [12]

- a) Application of View-shade analysis
- b) Stochastic Model and Deterministic Model
- c) Concept of DEM, TIN and data needed
- d) Distance measurement