GYP-510: Applications of GIS & GNSS

Course learning outcomes:

CO1. Define data structure in GIS
CO2. Analyze geographical change analysis using geo processing tool
CO3. Production of thematic maps in Arc GIS
CO4. Collecting points and tracking the routes in GNSS.

Exercise No.	Title of the Exercise (Total 52 Hrs.)
1	Introduction to GIS software.
2	Spatial Referencing.
3	Digitization - Extraction of features from Toposheets, Satellite image.
4	Map layout.
5	Linking spatial and non-spatial data.
6	Surface Analysis - Elevation, Slope and Aspect mapping.
7	Measurement of lengths perimeter, areas.
8	Queries and Buffer analysis.
9	Overlay analysis.
10	Rainfall Variability and Intensity Map.
11	Drainage delineation – Stream ordering.
12	Introduction of GNSS.
13	Finding latitude, Longitude and altitude.
14	Tracking.
15	Routing in GNSS.

References:

1. Peter A. Burrough and Rachael A. McDonnell (1998): Principles of Geographic Information systems, Oxford University Press, New York.
2. Aronoff S. (1989): Geographic Information System, A Management Perspective, WDL Publications, Ottawa, Canada
3. Ian Heywood, Sarah Cornelius, Steve Carver (2003): An Introduction to Geographic Information System, Pearson Education Ltd., India
4. Chrisman N.R. (1997): Exploring Geographic Information System, Wiley, New York.
5. www.gisdevelopment.net/tutorials/human008.html
6. www.gisloungue.com/remotesening.html.