

# CERTIFICATE COURSE IN GIS AND REMOTE SENSING

## SYLLABUS

DEPARTMENT: DEPARTMENT OF GEOLOGY AND ENVIRONMENTAL SCIENCE

NAME OF COURSE: CERTIFICATE COURSE IN GIS AND REMOTE SENSING

COURSE CODE: CPCC12

TOTAL HOURS: 60

THEORY SECTION – TOTAL 26 HOURS

### UNIT-I INTRODUCTION TO GIS (6 HOURS)

- Concept of GIS
- Data Models
- Projection
- GPS Concept

### UNIT- II CARTOGRAPHY AND GIS (6 HOURS)

- Introduction to Map
- Types of Maps
- Map & Globe
- Map Scale & Layout

### UNIT -III REMOTE SENSING (6 HOURS)

- Basics of Remote Sensing
- Photogrammetry and Cartography
- Digital Image Processing
- Satellite Image

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UNIT -IV APPLICATION FO GIS (3 HOURS)

UNIT -V INTRODUCTION OF GIS SOFTWARE (3 HOURS)

UNIT -VI THEORY EXAM MAXIMUM SCORE – 100 (2 HOURS)

PRACTICAL SECTION (SOFTWARE TRAINING) - TOTAL 34 HOURS

UNIT-I QGIS (20 HOURS)

- Digitizing and Editing of Spatial Data
- Database creation and Management
- Spatial Analysis of Data
- Map preparation
- Arc GIS (Hands on Training and Demonstration)
- Group Project – 10 hours

UNIT- II GPS TRAINING – HAND HELD (2 HOURS)

UNIT- III INDIVIDUAL PRESENTATION (2 HOURS)