

DEMAND PAVIATH INTEGRATED SOLUTION

CIVIL ENGG

CIVIL POLY

REMOTE SENSING AND BIS

Paviath ONLINE

◆ CIVIL POLY ◆ III YEAR ELECTIVE ◆ CODE CEM53.2

BASICS OF REMOTE SENSING: DEFINITIONS AND

ITS COMPONENTS -ENERGY SOURCES AND

RADIATION PRINCIPLES - ELECTROMAGNETIC

RADIATION (EMR) – SPECTRUM – WAVE LENGTH Regions important to remote sensing –

1.1 FUNDAMENTALS OF REMOTE SENSING

OBJECTIVES

- IDENTIFY THE BASIC CONCEPTS OF REMOTE SENSING
- EXPLAIN ELECTROMAGNETIC RADIATION
- EXPLAIN THE APPLICATIONS OF GEOGRAPHIC Information system in civil engineering
- EXPLAIN GEOMETRIC ELEMENTS OF VERTICAL PHOTOGRAPH
- IDENTIFY THE BASIC REMOTE SENSING IN CIVIL ENGINEERING
- EXPLAIN THE BASIC CONCEPTS GIS
- FIND HE PHOTOGRAMMETRY CONCEPTS AND FUNDAMENTALS OF AIR PHOTO INTERPRETATION
- ANALYSE AND INTERPRET GIS RESULT
- STATE THE CURRENT ISSUE AND TRENDS IN GIS APPLICATION IN CIVIL ENGINEERING.

ATMOSPHERIC SCATTERING , ABSORPTION – ATMOSPHERIC WINDOWS – SPECTRAL SIGNATURE CONCEPTS – TYPICAL SPECTRAL REFLECTIVE CHARACTERISTICS OF WATER, VEGETATION AND SOIL CHARACTERISTIC OF REAL REMOTE SENSING SYSTEM , PLATFORMS , ORBIT TYPES ,SENSORS ,RESOLUTION CONCEPT SATELLITE ,-PAY LOADED DESCRIPTION OF IMPORTANT INDIAN EARTH RESOURCES AND METEOROLOGICAL SATELLITES

> 5.1 GIS - DATAENTRY.STORAGEANDANALYSIS DATA MODELS - VECTOR AND RASTER DATA -DATA COMPRESSION - DATA INPUT BY DIGITIZATION AND SCANNING, DATA STORAGE -ATTRIBUTED AT ANALYSIS - INTEGRATED DATA ANALYSIS - MAPPING CONCEPT - DEVELOPMENT OF MAP OVERLAY, OVER LAY OPERATION -ERRORS AND QUALITY CONTROL. LAND INFORMATION SYSTEM (LIS) - VARIOUS GIS APPLICATIONS IN CIVIL ENGINEERING.

2.1 PHOTOGRAMMETRY

GEOMETRIC ELEMENTS OF A VERTICAL Photograph – steredscopic plotting instruments . Ortho Photos . Flight Planning

3.1 IMAGE INTERPRETATION AND ANALYSIS FUNDAMENTALS OF AIR – PHOTO INTERPRETATION – ELEMENTS OF IMAGE INTERPRETATION, CONCEPTS OF DIGITAL IMAGE PROCESSING IMAGE RECTIFICATION AND RESTORATION, IMAGE ENHANCEMENT, IMAGE CLASSIFICATION, APPLICATION OF REMOTE SENSING IN CIVIL ENGINEERING

TEXT BOOK:

LIL BYEURD (2005), GEOGRAPHIC INFORMATION SYSTEMS, PRENTICE OF INDIA. 2. ANJI REDOY.M.(1998), REMOTE SENSING AND GEOGRAPHICAL INFORMATION SYSTEMS. 3. LILLE SAND, T.M. & NIEFER R.W. (1998), REMOTE SENSING AND IMAGE INTERPRETATION, JOHN WILEY & SONS, NEW YORK. REFERENCE BODK: 1. BURROUGH P.A. (2000), PRINCIPLE OF GEOGRAPHICAL INFORMATION SYSTEMS FUR LAND RESOLURCES ASSESSMENT, CLARENDON PRESS, DXFORD. 2. CLARKE PARKS & CRAWE (2005), GEOGRAPHIC INFORMATION SYSTEMS & ENVIRONMENTAL MODELING, PRENTICE – HALL OF INDIA 2. SUDE PAUL (0988), ELEMENTS OF PHOTOGRAMMETRY, MC GRAWHILL, NEW DELHI. 4. SHAHAB FAZAL, "& IS BASICS", NEW AGE INTERNATIONAL PUBLICATIONS, CHENNA.

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4.1 FUNDAMENTALS OF GIS BASIC CONCEPTS OF GIS – BASIC SPATIAL CONCEPTS – COORDINATE SYSTEMS : DEFINITIONS – HISTORY OF DEVELOPMENT OF GIS – COMPONENTS OF GIS : HARDWARE , SOFTWARE , DATA , PEOPLE AND METHODS – PROPRIETARY AND OPEN SOURCE SOFTWARE – TYPES OF DATA – SPATIAL , ATTRIBUTE DATA – TYPES OF ATTRIBUTES – SCALES / LEVELS OF MEASUREMENTS – DATA BASE MANAGEMENT SYSTEMS (DBMS).

APM Civil Engineering

STC APM

SYLLABUS COACHING TRAINING - 2/UNIT TRAINING SELF - 4/UNIT ASSIGNMENT PRESENTATION – 2/UNIT SHOWTIME - 2/UNIT



ASCON RENGA

MATHS ILLUSTRATION - GEOMETRY EXPRESSIONS

SYLLABUS PERIOD TRAINING – 2/2 HRS/UNIT REMOTE - 2/2 HRS/UNIT DURATION - SEMESTER ONLINE/REMOTE ACCESS



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