NAME OF THE ASSOCIATE PROFESSOR: Dr. PARUL RANA

Class & Semester: B.A. 6th Semester

Subject: Paper 601:RS, GIS and Quantitative methods

Lesson Plan (January 2024-April 2024)
(January)

1: Introduction to Aerial Photograph

1.1 Definition and History of Aerial Photograph

1.2 Bases of Aerial Photograph

1.3 Classification of Aerial Photograph

   Identification of Aerial Photograph

1.5 Aerial camera and its types

Season and time of photography

1.7 Planning and execution of photographic flights

1.8 Completion of photographic task

1.9 Advantages of Aerial Photography

1.10 Application of Aerial Photography

(February)

Chapter 2: Elements of Aerial Photograph

2.1 Introduction

2.2 Image Interpretation

2.3 Bases principal of aerial photograph

2.4 Factor governing the quality of an image

2.5 Elements of image interpretation

   Chapter 3: Introduction to Remote Sensing
3.1 General Introduction

3.2 Meaning of Remote Sensing

3.3 Process of Remote Sensing

3.4 Stages of Remote Sensing

3.5 Electromagnetic Spectrum

3.6 Satellites and its historical development

3.6.1 Types of Satellites

3.6.1.1 Natural Satellites
3.6.1.2 Artificial Satellites

3.6.1.2.1 Geostationary Satellites
 Sun synchronous Satellites

 Revision of Chapter 2

Chapter 4: Types of Imageries and their application

4.1 False colour Imageries

4.2 True colour Imageries

 Revision of chapter 3

Chapter 4: Types of Imageries and their application

4.3 Application of imageries in agriculture
 Application of imageries in environment

Chapter 4: Types of Imageries and their application

4.5 Application of Imageries in resource mapping

 Revision of Chapter 4

March

Chapter 5: Introduction of GIS

5.1 Meaning and Concept of GIS

5.2 History of GIS

5.3 Definition of GIS

Chapter 5: Introduction of GIS

5.4 Purposes of GIS

5.5 Elements of GIS

 5.6 Data Model

5.7 Data structure

5.8 Error in GIS

5.9 Advantages of GIS

5.10 Hardware

5.10.1 Components of Hardware

5.11 Software and GIS

Chapter 6: Application of GIS in various fields of Geography

6.1 Application

6.1.1 Agriculture development and land evolution

6.1.2 Change detection of vegetation area

6.1.3 Analysis and monitoring of vegetation health

6.1.4 Analysis of deforestation

6.1.5 Waste land mapping

6.1.6 Soil resource mapping

6.1.7 Groundwater potential mapping

6.1.8 Geological and mineral exploration

6.1.9 Snow melt runoff forecasting

6.1.10 Forest fire monitoring and ocean productivity

April

Chapter 7: Measure of Central Tendency

7.1 Concept of Central Tendency

7.2 Definition of average (Mean)

7.2.1 Calculation of mean in individual series

7. 2.2 Calculation of mean in discrete series

7. 2.3 Calculation of mean in continuous series

7.2.4 Properties of mean

7.2 Merits and demerits of mean

7.3 Median 7.3.1
Introduction

7.3.2 Calculation of median in individual series

7.3.3 Calculation of median in discrete series

7.3.4 Calculation of median in continuous series

7.3.5 Merits and demerits of median

7.4 Mode

7.4.1 Introduction

Chapter 7: Measure of Central Tendency

7.4.2 Calculation of mode in Individual series

7.4.3 Calculation of mode in Discrete series

7.4.4 Calculation of mode in Continuous series

7.4.5 Merits and demerits of Mode

Revision of chapter 7

Chapter 8: Measure of Dispersion : Introduction

Range and Quartile Deviation

Mean Deviation

Standard Deviation

Standard Deviation

Coefficient of Variation

Revision of Statistics

Revision and Tests of entire syllabus

Class and Section: B.A.III, 6th Semester

Paper 602: Practical

Subject Lesson Plan: 18 weeks (from Jan to 30th April, 2024)

(January)

Demarcation of Principal Point , Conjugate Principal Point and Flight Line on Aerial

Photograph

(February)

1) Determination of Scale of Aerial Photographs
2) Interpretation of Single Vertical Aerial Photographs

(March)

1) Use of Stereoscope and identification of features on Aerial Photographs 2)

Visual identification of features on IRS 1D LISS III Imagery (Mark Copy of FCC)

(April)

1) Field Survey by students and Preparation of field survey reports by students
    2)   Checking of Files and Reports 3) Preparation for viva- voce

Class and Section: B.A.II 4th Semester

Paper 402 : Practical : Map Projections

Subject Lesson Plan: 18 weeks (16th Jan- 30th April, 2024)

(January)

1) Introduction to Map Projection: Meaning, Classification andImportance;
Characteristics of latitudes and longitudes lines
2) Cylinderical Projections: Characteristics, Applications and Drawing i) Simple
Cylinderical Projection ii) Cylinderical Equal Area Projection iii) Mercator's Projection

(February)

1) Conical Projections: Characteristics, applications and drawing i) Simple
Conical Projection with One Standard Parallel ii) Simple Conical Projection
with Two Standard Parallel iii) Bonne's projection iv) Polyconic Projection

v) International Map Projection

(March)

1) Zenithal Projections: Characteristics, applications and drawing i)
Polar Zenithal Equidistant Projection ii)PolarZenithal Equal Area

Projection iii) Polar Zenithal Gnomonic Projection iv) Polar Zenithal Stereographic Projection v)Polar Zenithal Orthographic Projection

(April)

Characteristics, applications and drawings of

i) Sinusoidal Projection
ii) Mollweide Projection& Checking of files & preparation for viva-voce