Department of Geography

Lesson plan- 2022-23 (Odd Semester)

**Geography and Ecosystem, GEOG-301 Theory**

Class- M. Sc. II, Semester-3

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| Month/Year | Topic to be covered | Co-curricular activities |
| September, 2022 | Concept of Ecosystem- Types, components and function of ecosystem  Energy flow in ecosystem:  -food chain, food web,  -trophic levels,  -ecological production  -ecological pyramids.  Biogeochemical cycles:  -Hydrological cycle  -carbon cycle  -oxygen cycle  -nitrogen cycle | Assignments, tests, Quiz, Topical Presentations by students,  Departmental events,  etc |
| October, 2022 | Biome: Scheme of Classification  -factors affecting the distribution of biomes  -Tropical evergreen rain forest biome  -Savanna biome  -Monsoon biome  -Temperate biome  -Marine biome  Ecosystem approach and its relevance in geography |
| November, 2022 | Man-environment relationship  Classification of resources;  -use and ecological imbalance with  reference to  --soil resources  --forest resources  --energy resources  Biodiversity and conservation:  -preservation and conservation of ecosystem through resource management  Environmental laws in India (the Wild Life Act, Water Act, Forest Act,  Environment Protection Act and National Environment Tribunal Act). |
| December, 2022 | Problems of pollution  -concept of air, water, and noise pollution  Environment legislation  -The Stockholm Conference,  -the Earth Summit,  -Kyoto Protocol  -Copenhagen Conference,  Revision |

Name & Signature of Teacher

Department of Geography

Lesson plan- 2022-23 (Odd Semester)

**Field Methods in Geography (Socio-economic) (Theory), GEOG-302A**

Class- M. Sc. II, Semester-3

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| Month/Year | Topics to be covered | Co-curricular activities |
| September, 2022 | Significance of Field work in Geography  Identification of Research Problem  Formulation of Research Design. | Assignments, tests, Quiz, Topical Presentations by students,  Departmental events,  etc |
| October, 2022 | Types and Sources of Data  -Primary data  -Secondary data  Preparation of Questionnaires  -design of Questionnaire  -structure of Questionnaire  Sample Design  -characteristics of sampling  -essentials of sampling  -types of sampling |
| November, 2022 | Collection of socio-economic data  -essentials and cautions  -convenience and feasibility  Retrieval and Analysis of Data |
| December, 2022 | Format of Report Writing  -design, structure and writing  Revision |

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Department of Geography

Lesson plan- 2022-23 (Odd Semester)

**Project Report based on Field Survey, GEOG-302-B**

Class- M. Sc. II, Semester-3

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| Month/Year | Topics to be covered | Co-curricular activities |
| September, 2022 | Introduction and meaning of Project Report based on Field Survey  Essentials of Project Report based on Field Survey  Characteristics of Project Report based on Field Survey | Assignments, tests, Quiz, Topical Presentations by students,  Departmental events,  etc |
| October, 2022 | Types and Sources of Data  -Primary data  -Secondary data  Preparation of Questionnaires  -design of Questionnaire  -structure of Questionnaire  Sample Design  -characteristics of sampling  -essentials of sampling  -types of sampling |
| November, 2022 | Selection, visit and collection of socio-economic data for writing project report  Collection of socio-economic data  Retrieval and Analysis of Data |
| December, 2022 | Data analysis and presentation  Report writing in laboratory  -design, structure and writing  Revision |

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Department of Geography

Lesson plan- 2022-23 (Odd Semester)

**Urban Geography, GEOG-303(i)**

Class- M. Sc. II, Semester-3

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| Month/Year | Topic to be covered | Co-curricular activities |
| September, 2022 | Urban Geography: nature, scope and concepts  Origin and evolution of towns  factors of urban growth  Economic base of cities: concept and employment ratio | Assignments, tests, Quiz, Topical Presentations by students,  Departmental events,  etc |
| October, 2022 | Functional classification of cities: concepts  scheme of classification  Rural Urban Fringe: structural characteristics and its development.  City and region: concepts of influence and dominance,  methods of delimitation of area of influence and area of dominance |
| November, 2022 | Urban morphology and landuse structure: city core, commercial, industrial and residential areas  Models of city structure:  -concentric zone model by E.W.Burgess,  -sector model by Homer Hoyt  -multiple nuclei model by Harris and Ullman |
| December, 2022 | Central place theory of Christaller and Losch  Rank size rule  Law of primate city  Social area analysis  Revision |

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Department of Geography

Lesson plan- 2022-23 (Odd Semester)

**Geography and Disaster Management, GEOG-304(iv)**

Class- M. Sc. II, Semester-3

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| Month/Year | Topic to be covered | Co-curricular Activities |
| September, 2022 | Definition, nature and classification of disasters  Geography and disasters:  -major disasters of world,  -disaster profile of India | Assignments, tests, Quiz, Topical Presentations by students,  Departmental events,  etc |
| October, 2022 | Tectonic Disasters: Volcanoes, Earthquakes, Tsunamis, Landslides  Hydrological Disasters: Floods and Droughts  Climatic Disasters: Cyclones, Heavy Precipitation  Human Induced Disasters: Epidemics, Industrial and Transport Disasters; Wars and Terrorism induced Disasters |
| November, 2022 | Vulnerability to Disasters and Affecting Factors  Planning for Disaster  -Mitigation and Preparedness  Mitigation Measures of Disasters  Post Disaster Recovery and Rehabilitation |
| December, 2022 | Impacts of Disaster on Society and Economy  Remote Sensing and GIS Applications in Disaster Prevention and Monitoring  Revision |

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**Lesson Plan**

**M.Sc Geography\_3rd Semester\_ Remote Sensing Theory (2022-23 odd semester)**

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| Sr. No | Topics | No. of Days | Completed up to | Activities |
| 1 | Fundamentals: Remote Sensing, definition, and scope, EMR characteristics, Interaction with matter, remote sensing regions and bands, types of remote sensing. | 20 | 14 Aug | Class Test 1 |
| 2 | Aerial Photographs: aerial photos, types and scale, resolution, geometric properties of single aerial photos, stereoscopy, stereoscopic parallax, relief displacement. | 20 | 10 Sept | Assignment 1 |
| 3 | Satellite Imagery: General orbital characteristics of remote sensing satellites, general characteristics of remote sensing sensors, characteristics of Indian remote sensing satellite and raw Remote Sensing data. | 20 | 4 Oct | Class Test 2 |
| Student’s power point presentation |
| 4 | Interpretation and Application: Elements of image interpretation, image processing techniques: Visual and Digital. Applications in resource mapping and monitoring | 20 | 31 Oct | Assignment 1 |
| 5 | Revision | 10 | Up to Exam |  |

Department of Geography

Lesson plan- 2022-23 (Odd Semester)

**Introduction to Remote Sensing (Practical), GEOG-305(B)**

Class- M. Sc. II, Semester-3

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| Month/Year | Topic to be covered | Co-curricular activities |
| September, 2022 | Identification of Flight Line and practice  Scale of Photographs and Practice | Assignments, tests, Quiz, Topical Presentations by students,  Departmental events,  etc |
| October, 2022 | Determination of height of objects from single vertical photographs- and practice  Identification of objects and features with stereoscope- and practice  Preparation of Thematic maps on landuse/land cover and Practice |
| November, 2022 | Georeferencing of satellite imagery in image processing software- and practice  Image to image rectification- and practice  Creating subset and practice |
| December, 2022 | Merging images of various resolution- and practice  Making false colour composite and practice  Revision |

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