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 ecosystemEnergy 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 biomeEcosystem approach and its relevance in geography |
| November, 2022 | Man-environment relationshipClassification of resources;-use and ecological imbalance withreference to --soil resources--forest resources--energy resourcesBiodiversity and conservation: -preservation and conservation of ecosystem through resource managementEnvironmental 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 pollutionEnvironment 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 GeographyIdentification 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 dataPreparation of Questionnaires -design of Questionnaire-structure of QuestionnaireSample Design-characteristics of sampling-essentials of sampling-types of sampling |
| November, 2022 | Collection of socio-economic data-essentials and cautions-convenience and feasibilityRetrieval and Analysis of Data |
| December, 2022 | Format of Report Writing-design, structure and writingRevision |

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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 SurveyEssentials of Project Report based on Field SurveyCharacteristics 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 dataPreparation of Questionnaires -design of Questionnaire-structure of QuestionnaireSample 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 dataRetrieval and Analysis of Data |
| December, 2022 | Data analysis and presentationReport writing in laboratory-design, structure and writingRevision |

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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 conceptsOrigin and evolution of towns factors of urban growthEconomic 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 classificationRural 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 areasModels 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 LoschRank size rule Law of primate citySocial area analysisRevision |

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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 disastersGeography 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, LandslidesHydrological Disasters: Floods and DroughtsClimatic Disasters: Cyclones, Heavy PrecipitationHuman Induced Disasters: Epidemics, Industrial and Transport Disasters; Wars and Terrorism induced Disasters |
| November, 2022 | Vulnerability to Disasters and Affecting FactorsPlanning for Disaster -Mitigation and Preparedness Mitigation Measures of Disasters Post Disaster Recovery and Rehabilitation |
| December, 2022 | Impacts of Disaster on Society and EconomyRemote Sensing and GIS Applications in Disaster Prevention and MonitoringRevision |

Name & Signature of Teacher

**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 practiceScale 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 practiceIdentification of objects and features with stereoscope- and practicePreparation of Thematic maps on landuse/land cover and Practice |
| November, 2022 | Georeferencing of satellite imagery in image processing software- and practiceImage to image rectification- and practiceCreating subset and practice |
| December, 2022 | Merging images of various resolution- and practiceMaking false colour composite and practiceRevision |

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