Name of Assistant Prof.: Dr Rajender Kumar Class: M.A. $\mathbf{1}^{\mathrm{ST}}$ SEM

Subject: Climatology

Unit 1: Nature, Scope & Climatic Elements

Week	Topics & Subtopics
1	Nature and Scope of Climatology
2	Atmospheric Temperature: Meaning, factors, distribution
3	Atmospheric Pressure: Concept, types, distribution
4	Atmospheric Moisture: Humidity, condensation, precipitation
5	General Atmospheric Circulation
6	Jet Streams: Types, characteristics, significance

Unit 2: Weather Systems and Ocean-Atmospheric Interactions

Week	Topics & Subtopics
7	Air Masses: Concept, types, modification
8	Fronts: Types, formation, weather associated
9	Cyclones: Tropical and Temperate
10	Tornadoes: Concept, formation, distribution
11	Ocean-Atmospheric Interaction: El Niño
12	Monsoon Winds: Mechanism, types, regional effects

Unit 3: Global Climate System and Classification

Week	Topics & Subtopics
13	Approaches to Climatic Classification
14	Koppen Classification: Types, characteristics
15	Thornthwaite Classification: Concept and applications
16	Major Climates of the World: Tropical Climates
17	Major Climates of the World: Polar Climates

Unit 4: Climate Change and Environmental Impacts

Week	Topics & Subtopics
18	Climatic Changes: Evidences, Possible Causes, Global Warming, Acid Rain,
	Problems of Acid Rain

Name of Assistant Prof.: Dr Rajender Kumar Class: B.A Hon. 3^{rd} SEM

Subject: Climatology

Unit 1: Introduction & Elements of Weather and Climate

Week	Topics & Subtopics
1	Climatology: Meaning, Nature, Scope, and Significance
2	Elements of Weather and Climate
3	Atmosphere: Origin and Composition
4	Structure of Atmosphere and its Significance
5	Solar Radiation and Heat Budget
6	Distribution of Temperature

Unit 2: Atmospheric Pressure, Winds & Humidity

Week	Topics & Subtopics
7	Atmospheric Pressure: Meaning, Types, and Distribution Patterns
8	General Atmospheric Circulation
9	Planetary, Seasonal, and Local Winds
10	Jet Streams: Characteristics, Types, Significance
11	Atmospheric Humidity, Condensation Forms, Fog and Clouds
12	Rainfall: Processes, Types, and Distribution

Unit 3: Air Masses, Fronts & Weather Disturbances

Week	Topics & Subtopics
13	Air Masses: Concept and Classification
14	Fronts: Genesis, Classification, and Associated Weather Phenomena
15	Weather Disturbances: Cyclones and Anticyclones
16	Weather Disturbances: Hail Storms, Cloudbursts, Heat Waves

Unit 4: Monsoon, Climate Change, and Applied Climatology

Week	Topics & Subtopics
17	Monsoon: Concept of Origin (Classical & Modern Theories), Distribution, and
	Impact
18	EL Nino, La Nina, ENSO; Climatic Classification (Koppen, Thornthwaite,
	Trewartha); Climate Change, Global Warming; Applied Climatology (Agriculture,
	Human Health)

Name of Assistant Prof.: Dr Rajender Kumar Class: B.A Hon. 1st SEM Minor

Class: B.A Hon. 1st SEM Minor Subject: Introduction to Geography

Unit 1: Introduction to Geography

Week	Topics & Subtopics
1	Geography: Meaning, Nature, Scope, and Branches
2	Place of Geography in Classification of Sciences
3	Geography and Other Disciplines
4	Career Opportunities for Geographers

Unit 2: Core Geographic Concepts & Geology

Week	Topics & Subtopics
5	Core Geographic Concepts: Location, Direction, Patterns
6	World Time Zones, Indian Standard Time, International Date-Line
7	Interior of the Earth
8	Plate Tectonic Theory
9	Rocks: Meaning and Classification (Igneous, Sedimentary, Metamorphic)

Unit 3: Atmospheric Structure and Dynamics

Week	Topics & Subtopics
10	Composition and Structure of the Atmosphere
11	Elements of Weather and Climate
12	Atmospheric Temperature: Insolation and Heat Budget
13	Vertical and Horizontal Distribution of Pressure
14	Wind Circulation: Planetary, Periodic, and Local Winds

Unit 4: Atmospheric Moisture, Precipitation, and Pollution

Week	Topics & Subtopics
15	Atmospheric Moisture: Humidity, Evaporation, and Condensation
16	Hydrological Cycle; Types of Precipitation; Distribution of Rainfall
17	Atmospheric Pollution: Causes, Consequences, Control Measures
18	Atmospheric Pollution and Global Warming

Name of Assistant Prof.: Dr Rajender Kumar Class: B.A Pass 1st SEM

Class: B.A Pass 1st SEM Subject: Physical Geography 1

Unit 1: Introduction & Earth Structure

Week	Topics & Subtopics
1	Nature and Scope of Physical Geography
2	Interior of the Earth: Structure and Composition
3	Rocks: Meaning, Characteristics, and Classification
4	Igneous Rocks: Types, Characteristics, Examples
5	Sedimentary Rocks: Types, Characteristics, Examples
6	Metamorphic Rocks: Types, Characteristics, Examples

Unit 2: Geomorphic Processes & Plate Tectonics

Week	Topics & Subtopics
7	Geomorphic Processes: Endogenetic Forces
8	Geomorphic Processes: Exogenetic Forces
9	Continental Drift Theory
10	Sea Floor Spreading Theory
11	Plate-Tectonic Theory: Concept and Mechanism
12	Plate-Tectonic Theory: Evidence and Applications

Unit 3: Landforms, Volcanoes, and Earthquakes

Week	Topics & Subtopics
13	Classification of Landforms: First, Second, and Third Order
14	Volcanoes: Types, Mechanism, and Distribution
15	Earthquakes: Types, Measurement (Magnitude, Intensity)
16	Earthquakes: Geographical Distribution and Hazards

Unit 4: Denudational Processes & Fluvial/Wind Work

Week	Topics & Subtopics
17	Denudational Processes: Weathering, Erosion, Mass Wasting
18	Work of Rivers and Wind; Cycle of Erosion (Davis)

Name of Assistant Prof.: Dr Rajender Kumar Class: B.A Pass 1st SEM

Subject: Introductory Cartography (Practical) (Part-B)

Unit 1: Introduction to Cartography and Map Design

Week	Topics & Subtopics	
1	Nature and Subject Matter of Cartography	
2	Historical Development of Cartography	
3	Map Design and Cartographic Techniques	
4	Visual Hierarchy and Legibility of Maps	
5	Classification of Maps: Thematic, Topographic, Special Purpose	
6	Elements of Map: Direction and Index	
7	Elements of Map: Conventional Signs and Symbols (Point, Line, Area)	
8	Review & Practical Exercises on Map Elements	

Unit 2: Map Scales and Relief Representation

Week	Topics & Subtopics
9	Map Scales: Statement Scale
10	Map Scales: Representative Fraction (RF)
11	Map Scales: Graphical Scale
12	Review & Combined Exercises on Map Scales
13	Representation of Relief: Contours
14	Representation of Relief: Hachures
15	Representation of Relief: Form Lines
16	Spot Heights, Bench Marks, Trigonometrical Stations
17	Integrated Exercises: Relief Representation
18	Revision & Practical Evaluation

Name of the Assistant/ Associate Professor: Mr Kulwinder Singh Class: B.A Pass 1st SEM. (Sec-C)
Subject: Physical Geography 1

Unit 1: Introduction & Earth Structure

Week	Topics & Subtopics
1	Nature and Scope of Physical Geography
2	Interior of the Earth: Structure and Composition
3	Rocks: Meaning, Characteristics, and Classification
4	Igneous Rocks: Types, Characteristics, Examples
5	Sedimentary Rocks: Types, Characteristics, Examples
6	Metamorphic Rocks: Types, Characteristics, Examples

Unit 2: Geomorphic Processes & Plate Tectonics

Week	Topics & Subtopics
7	Geomorphic Processes: Endogenetic Forces
8	Geomorphic Processes: Exogenetic Forces
9	Continental Drift Theory
10	Sea Floor Spreading Theory
11	Plate-Tectonic Theory: Concept and Mechanism
12	Plate-Tectonic Theory: Evidence and Applications

Unit 3: Landforms, Volcanoes, and Earthquakes

Week	Topics & Subtopics
13	Classification of Landforms: First, Second, and Third Order
14	Volcanoes: Types, Mechanism, and Distribution
15	Earthquakes: Types, Measurement (Magnitude, Intensity)
16	Earthquakes: Geographical Distribution and Hazards

Unit 4: Denudational Processes & Fluvial/Wind Work

Week	Topics & Subtopics
17	Denudational Processes: Weathering, Erosion, Mass Wasting
18	Work of Rivers and Wind; Cycle of Erosion (Davis)

Name of the Assistant/ Associate Professor: Mr Kulwinder Singh

Class: M.A. 3rd SEM. Subject: Oceanography

Unit 1: Introduction & Ocean Origins

Week	Topics & Subtopics
1	Definition and Scope of Oceanography
2	Major Sea Voyages and Contributions
3	Oceanography and Other Sciences
4	Distribution Pattern of Land and Sea
5	Origin of Ocean Basins: Wegener's Drift Hypothesis
6	Sea Floor Spreading and Plate Tectonics

Unit 2: Ocean Floor and Features

Week	Topics & Subtopics
7	Depth of Oceans and Ocean Floor Profile
8	Abyssal Plains and Submarine Canyons
9	Coral Reefs: Origin and Distribution
10	Ocean Deposits: Types and Significance
11	Configuration of Ocean Floors: Indian Ocean
12	Configuration of Ocean Floors: Atlantic Ocean

Unit 3: Ocean Properties and Dynamics

Week	Topics & Subtopics
13	Temperature of Oceans
14	Salinity and Density of Oceans
15	Dynamics of Ocean Currents
16	Major Currents of Atlantic, Pacific, and Indian Oceans
17	Tides: Origin and Types; Tsunami

Unit 4: Oceans and Human Interaction

Week	Topics & Subtopics
18	Ocean Currents and Their Impact on Climate and Economy; Oceans as Source of
	Food, Minerals, and Energy; Sea-Level Changes, Evidence, Mechanism, Impact;
	Maritime Laws, Revision

Name of the Assistant/ Associate Professor: Mr Kulwinder Singh

Class: B.A5 TH. SEM. HONS Subject: Urban Geography

Unit I: Introduction to Urban Geography

Week	Topics & Subtopics
1	Nature and Scope of Urban Geography
2	Definition and Characteristics of Urban Places
3	Evolution of Cities: Ancient Times
4	Evolution of Cities: Medieval Times
5	Evolution of Cities: Modern Times

Unit II: Size, Spacing, and Urban Theories

Week	Topics & Subtopics
6	Size and Spacing of Cities
7	Rank-Size Rule
8	Primate City Concept
9	Central Place Theory (Christaller)
10	Ecological Processes: Centripetal and Centrifugal Forces

Unit III: Internal Structure of Cities

Week	Topics & Subtopics
11	Concentric Zone Theory (Burgess)
12	Sector Theory (Hoyt)
13	Multiple Nuclei Theory (Harris & Ullman)
14	Functional Classification of Towns
15	Integrated Exercise: Internal Structure Models

Unit IV: Urbanization

Week	Topics & Subtopics
16	Definition and Measures of Urbanization
17	Urbanization Processes
18	Geographical Approaches and Global Features of Urbanization

Name of Assistant Prof.: Mr Ashok Ahlawat Class: M.A. 3rd SEM

Subject: Political Geography

Unit 1: Introduction & Perspectives

Week	Topics & Subtopics
1	Nature and Scope of Political Geography
2	Perspectives: Political-Economy
3	Perspectives: World Systems Theory
4	Perspectives: Place and Globalisation

Unit 2: Nation, State, and Governance

Week	Topics & Subtopics
5	Concepts of Nation, State, and Nation-State
6	Emergence and Growth of Territorial States
7	Globalisation and the Crisis of the Territorial State
8	Forms of Governance: Unitary and Federal

Unit 3: Geopolitics

Week	Topics & Subtopics
9	Rise and Demise of German Geopolitics
10	Geopolitics in the Post-Cold War World
11	S.B. Cohen's Model of Geo-Strategic Regions
12	S.B. Cohen's Model of Geo-Political Regions (Contd.)

Unit 4: India and Regional Politics

Week	Topics & Subtopics
13	India as a Regional Power in South Asia
14	National and Regional Political Parties in India
15	Women as a Marginalized Section in Indian Politics
16	Inter-State Water Disputes in India
17	Other Inter-State Water Conflicts
18	Review and Integration

Name of Assistant Prof.: Mr Ashok Ahlawat

Class: B.A. 1st SEM (Sec. A) Subject: Physical Geography 1

Unit 1: Introduction & Earth Structure

Week	Topics & Subtopics
1	Nature and Scope of Physical Geography
2	Interior of the Earth: Structure and Composition
3	Rocks: Meaning, Characteristics, and Classification
4	Igneous Rocks: Types, Characteristics, Examples
5	Sedimentary Rocks: Types, Characteristics, Examples
6	Metamorphic Rocks: Types, Characteristics, Examples

Unit 2: Geomorphic Processes & Plate Tectonics

Week	Topics & Subtopics
7	Geomorphic Processes: Endogenetic Forces
8	Geomorphic Processes: Exogenetic Forces
9	Continental Drift Theory
10	Sea Floor Spreading Theory
11	Plate-Tectonic Theory: Concept and Mechanism
12	Plate-Tectonic Theory: Evidence and Applications

Unit 3: Landforms, Volcanoes, and Earthquakes

Week	Topics & Subtopics
13	Classification of Landforms: First, Second, and Third Order
14	Volcanoes: Types, Mechanism, and Distribution
15	Earthquakes: Types, Measurement (Magnitude, Intensity)
16	Earthquakes: Geographical Distribution and Hazards

Unit 4: Denudational Processes & Fluvial/Wind Work

Week	Topics & Subtopics
17	Denudational Processes: Weathering, Erosion, Mass Wasting
18	Work of Rivers and Wind; Cycle of Erosion (Davis), Revision

Name of Assistant Prof.: Mr Ashok Ahlawat

Class: M.A. 1st SEM

Subject: Statistical Methods in Geography

Unit 1: Introduction to Statistics in Geography

Week	Topics & Subtopics
1	Statistics, Geography, and Significance
2	Primary and Secondary Data
3	Levels of Data Measurement: Nominal, Ordinal
4	Levels of Data Measurement: Interval, Ratio

Unit 2: Measures of Central Tendency & Centrographic Techniques

Week	Topics & Subtopics
5	Measures of Central Tendency: Arithmetic Mean
6	Measures of Central Tendency: Median
7	Measures of Central Tendency: Mode
8	Centroid Techniques: Mean Centre
9	Median Centre and Standard Distance

Unit 3: Measures of Dispersion and Concentration

Week	Topics & Subtopics
10	Measures of Dispersion: Mean Deviation
11	Standard Deviation and Coefficient of Variation
12	Lorenz Curve and Gini Coefficient
13	Location Quotient

Unit 4: Correlation and Regression Analysis

Week	Topics & Subtopics
14	Scatter Diagram
15	Correlation: Spearman's Rank Difference
16	Correlation: Karl Pearson's Product Moment
17	Regression Analysis: Regression Equations, Line of Best Fit
18	Application of Regression in Geography

Name of Assistant Professor: Dr. Dushyant Kumar

Class M.A. 3rd Sem. 2025-2026

Subject: Remote Sensing 03-09-2025 onward

Week 1	Introduction, development and applications of Remote Sensing technology; Electromagnetic radiation and remote sensing; Energy interactions in atmosphere.
Week 2	Energy interactions with earth surface features; Spectral signatures, Basic concepts and advantages of—Optical Remote Sensing; Thermal Remote Sensing.
Week 3	Microwave Remote Sensing; Hyper spectral Remote Sensing.
Week 4	Remote Sensing below Ground Surface; Ground investigations in Remote Sensing.
Week 5	Platforms: Airborne and Space borne; Sensors: Passive and Active.
Week 6	Image data characteristics: Spatial, Spectral, Radiometric and Temporal.
Week 7	History and development of Indian Space Programme.
Week 8	General Satellite Programmes: IRS Satellite Series, INSAT Series, Gagan Satellite Navigation System
Week 9	Extra-terrestrial exploration: Lunar exploration, Mars exploration, Solar probes;
Week 10	International co-operations.
Week 11	Revision
Week 12	Revision
Week 13	Revision

Name of Assistant Professor: Dr. Dushyant Kumar

Class M.A. 3rd Sem. 2025-2026

Subject: GIS 03-09-2025 onward

Week 1	Introduction to GIS: Meaning, Concept, History and development; Scope and
	significance of GIS;
Week 2	Components and basic functions of GIS; Recent trends in GIS
Week 3	GIS education in India: Issues, progress and challenges; Significance of GIS in geography.
Week 4	Geographical data characteristics and sources: Nature, Types and sources; Accessibility and availability;
Week 5	; Spatial database models: Hierarchal, Network, Geo-relational, Object based and field-based model; Spatial data model: Raster and vector.
Week 6	Spatial analysis: Raster & vector overlay; Buffer analysis;
Week 7	Digital surface model: DSM,DTM&DEM, Spatial Interpolation: IDW,
Week 8	Spline & Kriging methods; Network analysis.
Week 9	Applications of GIS in regional development & planning, Agriculture,
Week 10	Applications of GIS in Hydrology, Urban and
Week 11	Applications of GIS in environmental studies.
Week 12	Revision
Week 13	Revision

Name of Assistant Professor: Dr. Dushyant Kumar

Class B.A. 1ST Sem. (SEC) 2025-2026

Subject: Fundamental of Geospatial Techniques 03-09-2025 onward

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Week 1	Geometric elements of aerial photographs;
Week 2	stereoscopy; stereoscopic vision (pocket stereoscope, mirror stereoscope);
	making stereograms;
Week 3	Fundamentals of aerial photo interpretation: elements of visual air photo
	interpretation.
Week 4	Comparison between aerial photograph and satellite image; scale
	determination on vertical aerial photograph;
Week 5	identification and mapping of physical and cultural features on an image
Week 6	Introduction to GIS – definition and concept;
	and desired to the desired to the per-
Week 7	hardware and software requirements for GIS;
Week 8	Creating basic layers in GIS (point) with any GIS software/manual.
Week 9	Creating basic layers in GIS (line) with any GIS software/manual.
Week 10	Creating basic layers in GIS (polygon) with any GIS software/manual.
Week 11	Creating basic layers in GIS (polygon) with any GIS software/manual.
Week 12	Revision
Week 13	Revision
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Name of Assistant Professor: Dr. Dushyant Kumar

Class B.A. 1ST Sem. (MDC) 2025-2026

Subject: General Geography 03-09-2025 onward

Week 1	Geography: meaning, definition, branches;
Week 2	Relation of geography with other disciplines; solar system.
Week 3	Core geographic concepts: origin of earth,
Week 4	its shape, rotation and revolution, formation of days, nights and seasons;
Week 5	Latitudes and longitudes; earth's interior.
Week 6	Earthquake; volcano;
Week 7	types of rocks: igneous, sedimentary and metamorphic;
Week 8	Weathering: definitions and classification.
Week 9	Composition of atmosphere: gases, water vapour, dust particle;
Week 10	Structure of atmosphere;
Week 11	Temperature; precipitation: meaning and types.
Week 12	Revision
Week 13	Revision

Name of Assistant Professor: Dr. Dushyant Kumar

Class B.A. 3RD Sem. (SEC) 2025-2026

Subject: Land Use Planning (Practical) 03-09-2025 onward

Week 1	Understanding land use/land cover
Week 2	Land use planning: meaning and significance; mapping of forest cover
Week 3	Mapping of built up area
Week 4	Mapping of transport routes
Week 5	Mapping of water bodies from topographical sheet/aerial photograph/ satellite image.
Week 6	Concepts of land use change and its management
Week 7	Spatio-temporal change analysis in land use/land cover through statistical diagrams
Week 8	Preparation and interpretation of existing/proposed land use/land cover map/plan of institution/locality/ area.
Week 9	Preparation and interpretation of existing/proposed land use/land cover map/plan of institution/locality/ area.
Week 10	Revision
Week 11	Revision
Week 12	Revision
Week 13	Revision

Name of Assistant Professor: Dr. Dushyant Kumar

Class M.A. 3RD Sem. 2025-2026

Subject: GIS (Practical) 03-09-2025 onward

Week 1	Stereo Vision Test, Orientation of stereo model under Mirror Stereoscope
Week 2	Determination of scale on an aerial photograph, Measurement of height of an object on single vertical aerial photograph
Week 3	Preparation of stereogram, stereo triplet and mosaic from aerial photographs
Week 4	Air photo Interpretation: Identification, mapping and interpretation of natural and cultural features.
Week 5	Satellite image interpretation: LISS-III, LISS-IV, Panchromatic, CARTOSAT, True color & FCC.
Week 6	Land use/Land cover mapping on the basis of above-mentioned satellite images, Identification, mapping and interpretation of natural and cultural features on above-mentioned at 2 satellite images.
Week 7	Spatial data import and export in GIS, Georeferencing and reprojection of spatial data.
Week 8	Shape file creation and digitization of geographic features, Linking attribute data with spatial data
Week 9	Spatial analysis: Raster & vector overlay, Buffer analysis.
Week 10	Digital surface modelling: DSM & DTM, Spatial Interpolation: IDW & Kriging.
Week 11	Query building: Raster & vector, Map layout design: Quantitative and qualitative.
Week 12	Revision
Week 13	Revision

Abu Hurera Sir – Weekly Syllabus Plan (Aug-Dec 2025)

Department of Geography, Govt. College Faridabad

MA 1st Year – Geomorphology

Week	Topics to Cover	Remarks / Holidays
1	Introduction: Nature & Scope of Geomorphology	Semester start
2	Structure & Composition of Earth	15 Aug – Independence Day
3	Geological Time Scale, Continental Drift	26 Aug – Janmashtami
4	Isostasy Concepts (Airy, Pratt, Heiskanen)	
5–6	Weathering & Mass Wasting	
7–9	Fluvial, Aeolian, Glacial & Coastal Landforms	2 Oct – Gandhi Jayanti
10–11	Theories of Landform Development: Davis, Penck, King	11 Oct – Dussehra
12	Mid-Sem Break	20–24 Oct
13–14	Applied Geomorphology	31 Oct – Diwali
15–18	Indian Geomorphology & Revision	14 Nov – Half Day

MA 1st Year – Resource Geography

Week	Topics	Remarks
1–2	Concept, Nature & Classification of Resources	
3–4	Global Distribution Patterns	
5–6	Water, Soil, Forest, Minerals	
7–8	Energy Resources	
9–10	Problems of Resource Utilization	
11–12	Sustainable Development	Mid-Sem Break
13–14	Resource Planning in India	Diwali
15–18	Global Resource Politics & Revision	

MA 2nd Year - Biogeography

Week	Topics	Remarks
1–2	Nature, Scope, and Development of Biogeography	
3–4	Factors affecting Distribution of Organisms	
5–6	Ecosystems: Structure, Function & Energy Flow	
Week	Topics	Remarks

7–8	Major Biomes of the World	
9–10	Human Impact on Environment	Gandhi Jayanti / Dussehra
11–12	Biodiversity: Types, Hotspots	Autumn Break
13–14	Conservation Strategies	Diwali
15–18	National Parks & Revision	

MA 1st Year – Foundation in Geography

Week	Topics	Remarks
1–2	Nature, Definition & Scope of Geography	
3–4	Dualism & Dichotomy: Physical vs Human Geography	
5–6	Geography as a Science of Synthesis	
7–8	Determinism, Possibilism, Neo-determinism	
9–10	Regional vs Systematic Geography	
11–12	Quantitative Revolution & Recent Trends	Mid-Sem Break
13–14	Humanistic, Radical & Behavioral Approaches	Diwali
15–18	Geography & Public Policy / Revision	

BA 3rd Year – Theory Paper

Week	Topics	Remarks
1–3	Nature, Scope & Importance of Economic Geography	
4–6	Agricultural Systems of the World	
7–9	Industrial Location Theories	Gandhi Jayanti
10–12	Transport & Trade Geography	Autumn Break
13–15	Economic Development & Globalization	Diwali
16–18	Revision & Test	

BA 2nd Hons – Practical Geography

Week	Practical Work	Remarks
1–2	Scale: Types, Construction and Conversion	
3–4	Map Projections: Conical, Cylindrical, Zenithal	
5–6	Topographical Sheet Interpretation	
7–8	Weather Map Analysis	
9–10	Surveying: Chain & Plane Table	
11–12	Field Work & Data Collection	Mid-Sem Break

Week	Practical Work	Remarks
13–14	Statistical Diagrams & Graphs	Diwali
15–18	Viva & Record Submission	