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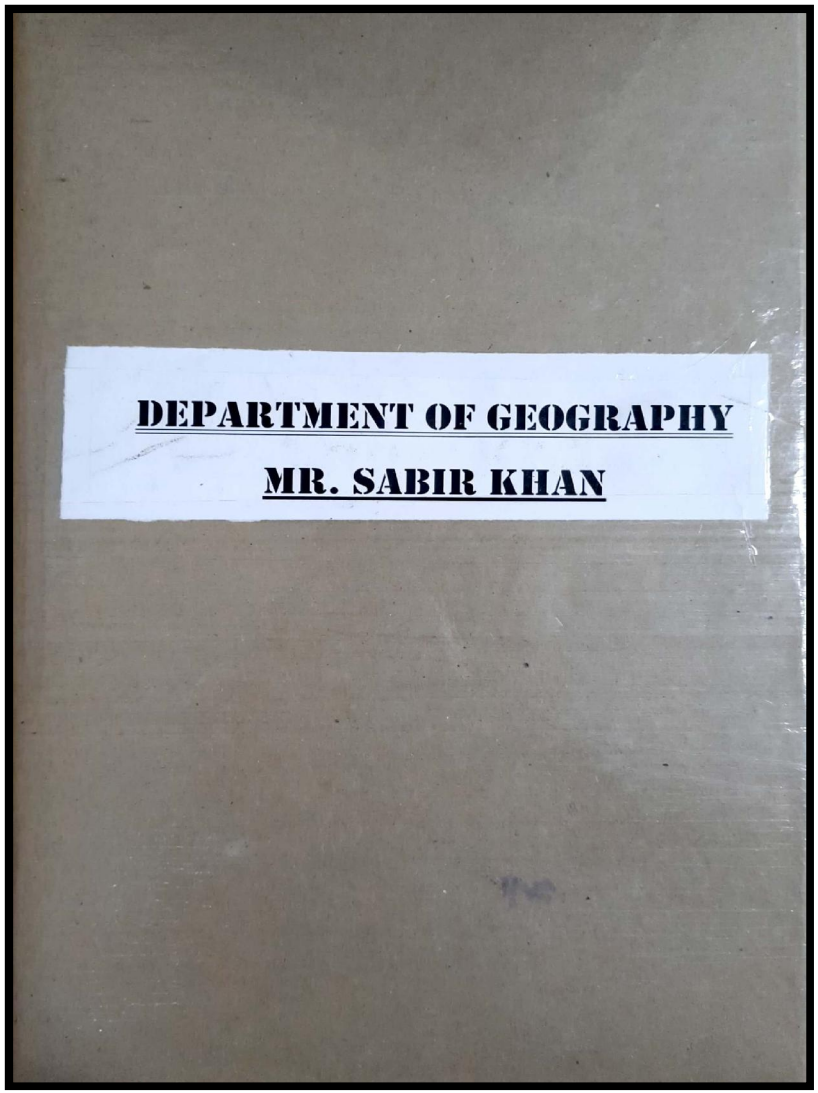

COURSE_PLAN_2020-21_MR_SABIR_KHAN

SOPHIA GIRLS' COLLEGE, AJMER (*Autonomous*)

B.A SEMESTER III

GEOGRAPHY OF INDIA-I (PAPER II) (GEO-302)

Max. Marks : 75 (50Ext; 25 Int) **Min. Marks: 30(20 Ext;10 Int)**

Credit: 03 **Duration: $2^{1/2}$ hrs**

SEM/ Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Distribution
SEM III SEPT.	**UNIT I** **India:** Physiographic Division		PPT, Chart, Maps, Visual 3-D Models	Identify physiographic regions of India and schematize the river systems of India.	*Knowledge Based* *Understanding Based* *Higher Order Thinking Skills Based*	
	Drainage: Himalayan and Peninsular River systems.		Match the following, Quiz, Demonstration			
			Maps, Flow Charts			Knowledge--55 Understanding-30 Higher Order-15
OCT.	**UNIT II** Regional and seasonal variation of Climate – Monsoon: Factors Affecting, Role of Jet Streams, El-Nina, La Nina;		Diagrams, Models, demonstration PPT's, PDF's	Describe factors affecting Indian monsoon system.		
	Climatic regions of India; Soil types of India, their		Diagrams, Models,			

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	distribution and characteristics;		Discussions, Quizzes			
	Vegetation types and their distribution and Conservation.		Maps, Diagrams, Models, Demonstration			
NOV.-DEC.	**UNIT III** Major Minerals: Metallic- Iron, Manganese, Copper, Bauxite, Gold;		Demonstration through PPT's and PDF's	Classify the major metallic and non-metallic minerals of India.		
	Non Metallic Minerals - Mica, Limestone;		PPT, Demonstration			
	Atomic Minerals and Conservation.		PPT, Case Studies, Flipped Classroom			

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M. A/M.Sc GEOGRAPHY (Previous)

SEMESTER I

POPULATION GEOGRAPHY (GEOM - 103)

Max Marks: 100(70Ext; 30 Int) **Min. Marks: 40(28 Ext;12 Int)**

Credit: 06 **Duration: 03 hrs**

COURSE PLAN

SEM/ Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
SEM I NOV.	UNIT I Population Geography: Nature, Scope;	Demography, Factors affecting.	PPT, Chart, Maps.	Explain the development of demography and elaborate the concept of population.	*Knowledge Based* Summarize the development of demography and elaborate the concept of population.	Knowledg e--40
	Objectives and Approaches;	Demography, Factors affecting.	PPT, Quiz.			
	Modern theories: Malthusian Theory, Optimum Theory and Demographic Transition Theory.	Concept of Sustainable development	Flow Charts, Diagrams.			
DEC.	UNIT II Population Dynamics: Qualitative and Quantitative aspect;	Age pyramids, Factors affecting, Qualitative aspects of population.	Diagrams, Models, demonstration through Globe	Measure and discuss the population dynamics of the world	*Understanding Based* Examine the population dynamics of the world	Understan ding-30
	Urbanization (with special reference to India);	Urban Sprawl, Slum development.	Diagrams, Models,			

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	Migration: Types, Causes, Consequences and related theories.	Push and Pull Factors	Maps, Diagrams, Models, Demonstration		*Higher Order Thinking Skills Based* Evaluate the theories of migration.	Higher Order-30
JAN. TO FEB	**UNIT III** World Population Distribution;	Regional disparity	Demonstration through rock samples	Critically evaluate the population as a resource and population policies.		
	Ackerman's Population Resource Regions; Critical appraisal of Population Policies of India;	Government initiatives and need of regional planning.	PPT, Demonstration			
	Human Development Index: Indicators and Measurements.	Social welfare and well-being, Happiness Index.	PPT, Case Studies, Flipped Classroom			

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M. A/M.Sc. GEOGRAPHY (Final) SEMESTER III
PRACTICAL GEOGRAPHY: REMOTE SENSING TECHNIQUES (GEOM-305)
Max Marks: 100(70Ext; 30 Int) Min. Marks: 40(28 Ext;12 Int) Credit: 06
Duration: 05 hrs

COURSE PLAN

SEM/ Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
SEM III JULY	**UNIT I** Remote Sensing: Definitions, Concepts, Evolution and Stages of Remote Sensing, Electromagnetic Spectrum.	Electromagnetic radiation, Concept of remote sensing.	PPT, Chart, Maps, Visual 3- D Models	Build a functional understanding of basic remote sensing concepts and applications. Demonstrate GIS techniques of processing remotely sensed data and understand data acquisition, storage and its synthesis.	*Knowledge Based* Discuss the functional understanding of basic remote sensing concepts and applications. *Understanding Based* Illustrate the GIS techniques of processing remotely sensed data.	Knowledge-- 30 Understandin
	Data Acquisition, Platforms, Sensors, Resolutions, Launch Vehicles, Merit and Demerit of Remote Sensing.	Platforms, Launch Vehicles Resolutions and sensors	Match the following, Quiz, Demonstration			
	Indian Space Programmes, Indian & Foreign Satellites, Hyperspectral Remote Sensing, Thermal and Microwave Remote Sensing,	Types of Remote Sensing	Maps, Flow Charts			
AUG UST	**UNIT II** Elements of Visual Image Interpretation,	Visual Image Interpretation	Diagrams, Models, demonstration through Globe			

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	Ground Verification. Applications of Remote Sensing.	Importance of Applications and ground verification.	Diagrams, Models, demonstration through Globe		*Higher Order Thinking Skills Based* Demonstrate orbital characteristics and data products.	g-40 Higher Order-30
	Major Remote Sensing Practicals using Erdas & SAGA Software, Creation of Base Map from Toposheet or Satellite Image	Thematic mapping	Maps, Diagrams, Models.			
SEPTEMBER-OCTOBER	**UNIT III** Layer Stacking, Mosaicking & Subset	Image Enhancement Techniques	Diagrams, Models.			
	Low Pass & High Pass Filtering	Image Enhancement Techniques	PPT, Demonstration			
	NDVI, Resolution Merge	Image Enhancement Techniques	PPT, Case Studies, Flipped Classroom			

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B.A SEMESTER IV

GEOGRAPHY OF INDIA-II (PAPER II) (GEO-402)

Max. Marks : 75 (50Ext; 25 Int) **Min. Marks: 30(20 Ext;10 Int)**

Credit: 03 **Duration: $2^{1/2}$ hrs**

SEM/ Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Distribution
SEM IV MAR.	UNIT I Conventional sources of energy- Coal, Petroleum (Origin, Distribution and Production.)		PPT, Chart, Maps, Visual 3-D Models, PDF's	Identify conventional and non-conventional sources of energy.	*Knowledge Based* 3. What is Solar System? 4. Illustrate the different layers of Earth's Interior? *Understanding Based* 3. Compare the Continental Drift Theory and the concept of Plate Tectonics? 4. Classify the different landforms formed by the action of river?	
	Natural Gas- Origin, Distribution and Production, Nuclear Energy: Distribution and Production, their conservation;		Match the following, Quiz, Demonstration through short Videos			Knowledge--55 Understanding-30 Higher Order-15
	Non Conventional Sources of Energy: Solar, Wind, Tidal and Bio Gas.		Maps, Flow Charts, Assignment			
APRIL	UNIT II Agriculture: Rice, Wheat, Sugar Cane, Cotton, Jute, Tea, Coffee (Essential conditions required and their		Diagrams, Group Discussions, Maps and Data Tabulations	Classify major industrial regions and major crops of India.		

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	production);				*Higher Order Thinking Skills Based* 3. Justify the present distribution of world continents and oceans on the basis of Hary Hess's Plate Tectonics Theory? 4. Critically evaluate the concepts of Sea Floor spreading?	
	Green Revolution; Industries- Iron and steel, textile, cement, paper and pulp.		Diagrams, Maps, Group Discussions on Data			
	Major Industrial regions of India.		Maps, Diagrams, Models, Demonstration			
MAY-JUNE	**UNIT III** Population: distribution, growth and density;		Discussion, Maps	Interpret the spatial distribution pattern of population in India and classify planning regions.		
	Urbanization- Smart city concept;		PPT, Demonstration through PDF's			
	National Population Policy of India, Impact of COVID in India on Labour Migration.		PPT, Case Studies, Assigments,Flipped Classroom			

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B.A SEMESTER VI

ENVIRONMENT GEOGRAPHY – II

(GEO-601)

Max. Marks : 75 (50Ext; 25 Int) **Min. Marks: 30(20 Ext;10 Int)**

Credit: 03 **Duration: $2^{1/2}$ hrs**

SEM/ Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Distribution
SEM VI MAR.	**UNIT I** Ecosystem: Concept, Types: Biotic and Non-Biotic		PPT, Chart, Maps, Visual 3-D Models	Know and understand geography of Vedic Age. Trace the contributio n of Greek, Roman, Arab, French, German, British and	*Knowledge Based* 9. What is Solar System? 10. Illustrate the different layers of Earth's Interior? *Understanding Based* 9. Compare the Continental Drift Theory and the concept of Plate Tectonics? 10. Classify the different landforms formed by the action of	Knowledge--55 Understanding- 30 Higher Order-
	Structure and Function of an ecosystem ; Energy flow in the ecosystem		Match the following, Quiz, Demonstration			
	Food chains, Food webs and Energy pyramids.		Maps, Flow Charts			

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				American Geographers. Compare Dualism in Geography.	river? *Higher Order Thinking Skills Based* 9. Justify the present distribution of world continents and oceans on the basis of Hary Hess's Plate Tectonics Theory? 10. Critically evaluate the concepts of Sea Floor spreading?	15
APR.	**UNIT II** Biodiversity: Definition, Concept, Conservation		Diagrams, Models, demonstration through PDF's			
	Environmental Pollution: Definition, Cause, Types: -Air pollution, Water pollution, Soil pollution,, Noise pollution		Diagrams, Models, demonstration through PPT's			
	Impact of COVID on Environment pollution in India		Maps, Diagrams, Discussions			
MAY-JUNE	**UNIT III** Environmental Ethics : Issues and possible solutions		Discussions and Demonstrations through PPT's			
	Climate change, acid rain, ozone layer depletion, nuclear accidents		PPT, Demonstration			
	Environmental Protection Act, Issues involved in enforcement of environmental legislation, Public awareness		PPT, Case Studies, Flipped Classroom			

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M. A/M.Sc GEOGRAPHY SEMESTER II

DIGITAL CARTOGRAPHY, AERIAL PHOTOGRAPHY AND GPS (GEOM-204)

Max Marks: 100(70Ext; 30 Int) Min. Marks: 40(28 Ext;12 Int) Credits: 06 Duration: 03 hrs

COURSE PLAN

SEM/ Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
SEM II APRIL	**UNIT I** Nature and Scope of Cartography, Basic Geodesy, Geoid /Datum/ Ellipsoid, Elements of Digital Cartography,	Understanding of a map.	PPT, Chart, Maps, Visual 3- D Models	Identify the components on an aerial photography and distinguish the elements of photo interpretation.	*Knowledge Based* Discuss the principles and elements of Digital Cartography. *Understanding Based* Exemplify the functional segments of GPS. *Higher Order Thinking Skills Based* Compare the limitations and	Knowledge--40 Understanding-30 Higher Order-30
	Maps: Types, Purpose and Classification, Generalization of Map, Map Layout, Data Models for Digital Cartographic Information,	Map coordinate system, Topographic maps.	Match the following, Quiz, Demonstration			
	Qualitative Mapping Techniques: Choroschematic And Chorochromatic.	Data models for digital	Maps, Flow			

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	Quantitative Mapping Techniques: Choropleth and Isopleth.	cartographic information	Charts		advantages of Arial Photographs.	
MAY	**UNIT II** Aerial Photography: Introduction to Aerial Photography – Basic Information and Specifications of Aerial Photographs;	Geometry of Aerial Photographs	Diagrams, Models.	Become familiar with the history, film type, and angles of aerial photography distortions and displacement .		
	Planning and Execution of Photographic Flights Basic; Geometric Characteristics of Aerial Photographs- Types of Aerial Photographs	Flight Execution	Diagrams, Models, demonstration through Globe			
	Types of Aerial Camera. Photogrammetry and Its Applications.	Stereographic vision,	Maps, Diagrams,			
JUNE - JULY	**UNIT III** Global Positioning System (GPS) – Introduction of Global Positioning System and Its Segments,	Coordinate system, Locational understanding.	Maps, Diagrams, Models, Demonstration	Use photogrammetric techniques to calculate: distance, area and object height from aerial photographs.		
	Satellite Constellation, Factors Affecting of GPS, GPS Signals and Codes	Understanding satellite signals,	PPT, Demonstration			
	Geo-Positioning-Basic Concepts. NAVSTAR, GLONASS, GALILEO & NAVIC, Applications of GPS.	Space Programs.	PPT, Case Studies, Flipped Classroom			

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M. A/M.Sc GEOGRAPHY **SEMESTER II**

PRACTICAL GEOGRAPHY: AIR PHOTO INTERPRETATION AND GPS **(GEOM-205)**

Max Marks: 100(70Ext; 30 Int) **Min. Marks: 40 (28 Ext;12 Int)** **Credits: 06** **Duration: 05 hrs**

COURSE PLAN

SEM/ Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
SEM I APRIL	Air Photos and Photogrammetry: Elements of photographic system: types, scales and ground coverage, resolution, radiometric characteristics, films, filters, aerial cameras, film exposures	Image interpretation elements. Flight planning.	PPT, Chart, Maps, Visual 3- D Models Match the following, Quiz, Demonstration Maps, Flow Charts	To develop knowledge, skills and competency to use stereoscopes, GPS for spatial mapping and referencing	*Knowledge Based* Discuss the elements of photographic system. *Understanding Based* Explain the Geometric fundamentals of photogrammetry *Higher Order Thinking Skills Based* Summarize the importance of GPS	Knowledge--60 Understanding-30 Higher Order-10
MAY	Geometric fundamentals of photogrammetry: Elements of vertical photographs, relief displacement, image parallax, stereoscopic, ortho photos air photo interpretation: shape, size, pattern, tone, texture, shadows, and site;	Concept of Ortho-photographs. Image Interpretation Elements Stereoscopic Vision	Diagrams, Models, demonstration through Globe Diagrams, Models, demonstration through Globe Maps, Diagrams, Models, Demonstration			

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JUNE - JULY	GPS Surveying and Mapping: Field Exercises using Hand Held GPS.	Image interpretation elements. Flight planning.	PPT, Demonstration PPT, Case Studies, Flipped Classroom		Sureying.	

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M. A/M.Sc GEOGRAPHY (Final) SEMESTER IV
PRACTICAL GEOGRAPHY: GEOGRAPHIC INFORMATION SYSTEM APPLICATION (GEOM-405)

Max Marks: 100(70Ext; 30 Int) **Min. Marks: 40(28 Ext;12 Int)** **Credit: 06** **Duration: 05 hrs**

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SEM / Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
SEM IV MARCH	**UNIT I** Introduction to GIS Basic Concepts: Definition and History, Components of GIS, Recent Trends and Applications of GIS.	Elements of GIS	PPT, Chart, Maps, Visual 3- D Models	Demonstrate proficiency in integrated geographical knowledge using geographical research tools including Spatial Statistics, Cartography, Remote Sensing,	*Knowledge Based* Discuss the elements of information technology. *Understanding Based* Summarize the Elements of spatial data. *Higher Order Thinking Skills Based* Illustrate the	Knowledge--30 Understanding-30 Higher
	Data Structure and Formats, Spatial Data Models – Raster and Vector, Data Base,	Data Structure and Models	Match the following, Quiz,			
	Linkage between Spatial and Non-Spatial Data, Data Inputting in GIS,	Integration of Data	Maps, Flow Charts			
APRIL	**UNIT II** Generating Thematic Map from the Toposheet.	Thematic Mapping	Diagrams, Models, Globe			
	Advanced GIS: Clip, Buffer, Proximity Analysis	Advanced GIS Concepts	Diagrams, Models,			

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	Overlay Analysis, Network Analysis, Interpolation, DEM, TIN.	GIS-Digital Elevation Models	Maps, Diagrams, Models,	GIS and GPS.	applications, of GIS in Land Information System.	Order-40
MAY-JUNE	UNIT III Digital Database Creation – Point Features, Line Features, Polygon Features, Data Collection and Integration, Non-Spatial Data Attachment Working with Tables ,	Shapefile's creations	Diagrams, Models,			
	Editing and Digitization, Clipping, Intersection, Union and Buffering Techniques. Spatial and Attribute Query and Analysis, Interpolation Techniques	Spatial Analysis	PPT,			
	GPS And GIS Integrations Output Preparation (Transfer of GPS Point Location), LU/LC Using Supervised and Unsupervised Classification, Map Making.	Map Making	PPT			

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