

Deccan Education Society's

Kirti M. Doongursee College of Arts, Science and Commerce (AUTONOMOUS)



Affiliated to

UNIVERSITY OF MUMBAI

Syllabus for
Program: Bachelor of Arts
Course: T.Y.B.A
Subject: **GEOGRAPHY**

Choice Based Credit System (CBCS)
with effect from
Academic Year 2024-2025

PROGRAM OUTCOMES

PO	Description
	A student completing Bachelor's Degree in Arts Program will be able to
PO1	Disciplinary Knowledge: Demonstrate a blend of conventional discipline knowledge and its applications to the modern world. Execute strong theoretical and practical understanding generated from the chosen program.
PO2	Critical Thinking and Problem solving: Exhibit the skill of critical thinking and use higher order cognitive skills to approach problems situated in their social environment, propose feasible solutions, and help in its implementation.
PO3	Social competence: Express oneself clearly and precisely to build good interpersonal relationships in personal and professional life. Make effective use of linguistic competencies to express themselves effectively in real and virtual media. Demonstrate multicultural sensitivity in group settings.
PO4	Research-Related Skills: Seeks opportunity for research and higher academic achievements in the chosen field and allied subjects and is aware about research ethics, intellectual property rights and issues of plagiarism. Demonstrate a sense of inquiry and capability for asking relevant/appropriate questions; ability to plan, execute and report the results of a research project be it in field or otherwise under supervision.
PO5	Personal and professional competence: Equip with strong work attitudes and professional skills that will enable them to work independently as well as collaboratively in a team environment.
PO6	Effective Citizenship and Ethics: Demonstrate empathetic social concern and equity centered national development; ability to act with an informed awareness of moral and ethical issues and commit to professional ethics and responsibility.
PO7	Environment and Sustainability: Understand the impact of scientific solutions in societal and environmental contexts and demonstrate the knowledge of and need for sustainable development.
PO8	Self-directed and Life-long learning: Acquire the ability to engage in independent and life-long learning in the broadest context of socio-technological changes.

Deccan Education Society's
Kirti M. Doongursee College (autonomous)

T Y B A Proposed Curriculum as per Autonomy

Year of implementation- 2024-25

Name of the Department: Geography

Semester	Course Code	Course Title	Credit
V	KUAGEO24501	IV: Introduction to Geomorphology	4
	KUAGEO24502	V: Geography of Rural Settlement	4
	KUAGEO24503	V(B): Regional Planning and Development	4
	KUAGEO24504	V(C): GEOGRAPHY OF HEALTH	4
	KUAGEO24505	VI: TOOLS AND TECHNIQUES IN GEOGRAPHY	3
	KUAGEO24506	VII: POPULATION GEOGRAPHY	4
	KUAGEO24507	VIII(A): GEOGRAPHY OF RESOURCES	4
	KUAGEO24508	VIII (B): Political Geography	4

	KUAGEO24509	IX: GEOSPATIAL TECHNOLOGY	4
VI	KUAGEO24601	IV: Introduction to Climatology and Oceanography	4
	KUAGEO24602	V: Geography of Urban Settlement	4
	KUAGEO24603	V(B): Geography of Transport	4
	KUAGEO24604	V (C) : Geography of Disaster Mitigation and Management	4
	KUAGEO24605	VI: TOOLS AND TECHNIQUES IN GEOGRAPHY FOR SPATIAL ANALYSIS-II (Practical)	4
	KUAGEO24606	VII: Economic geography	4
	KUAGEO24607	VIII (A): BIOGEOGRAPHY	4
	KUAGEO24608	VIII (B): SOCIAL AND CULTURAL GEOGRAPHY	4
	KUAGEO24609	IX: Research Methodology in Geography (Practical)	4

Course Code	SEM-V Paper-IV	Credits	Lectures /Week
	Introduction to Geomorphology	4	4
Course Outcomes: After the completion of this course, student should be able to: 1. To define the field of Geomorphology and to explain the essential principles of Geomorphology. 2. To know the mechanism of dynamic nature of earth's surface and it's interior. 3. To illustrate and explain the forces affecting the crust of the earth and its effect. 4. To understand the conceptual and dynamic aspects of landform development.			
Unit	Topics	No of Lectures	
I	Introduction to Geomorphology 1.1 Introduction to Geomorphology - Definition, Nature and Scope 1.2 Earth: Interior Structure and composition 1.3 Wegner's Continental Drift Theory 1.4 Plate Tectonic Theory	12	
II	Earth movements 2.1 Endogenic forces - types of folds and faults. 2.2 Earthquake: causes, effects, and distribution. 2.3 Earthquakes in India 2.4 volcanoes: causes, effects, and distribution	12	
III	Weathering and Mass Movement 3.1 Weathering - Meaning and concept, controlling factors of weathering. 3.2 Types of Weathering- physical, chemical and biological 3.3 Mass Movement - meaning, factors of Mass Movement 3.4 Classification of Mass Movement	12	
IV	Rocks and Minerals 4.1 Definition of rocks and minerals, Difference between rocks and minerals 4.2 Rock types – igneous rocks, characteristics and classification 4.3 Sedimentary rocks - characteristics and classification 4.4 Metamorphic rocks - characteristics and	12	

	classification	
V	Evolution of Landforms (Erosional and Depositional) 5.1 Fluvial- Erosional and depositional features of River 5.2 Aeolian - Erosional and depositional features of wind 5.3 Glacial - Erosional and depositional features of glacier 5.4 Coastal - Erosional and depositional features of sea waves	12
References: 1. Ahmed E. (1985) Geomorphology, Kalyani Publishers, New Delhi. 2. A.N. Strahler (1968) The Earth Sciences, Harper & Row Intl. Edn, New York 3. Dayal P. (1995) A Text Book of Geomorphology 2nd Edition. Sukla Book/Dept. Patna 4. Lal D.S. (2009) Physical Geography , Sharda Pustak Bhavan, Allahabad . 5. Hussain Majid (2001) Fundamentals of Physical Geography, Rawat Publications, Jaipur. 6. Negi B.S.(1993) Physical Geography, S.J. Publication, Meerut. 7. Qazi S.A. (2009) Principles of Physical Geography, A.P.H. Publication, New Delhi. 8. Savindra Singh (2015) Physical Geography, Pravalika Publication, , Allahabad. 9 . Thornberry W.D. (1969) Principles of Geomorphology 2nd Edition, Wiley International Edn. & Wiley Eastern Reprints 1984 10. Vishwas S. Kale, Avijit Gupta (2018), Introduction to Geomorphology, Universities Press. 11. William D. Thornbury(2004). Principles of Gomorphology, 2nd Edition, CBS Publisher and Distributor Pvt. Ltd, New Delhi		

Course Code	SEM – V Paper- V	Credits	Lectures /Week
K23UAGEOVC141	Geography of Rural Settlement	4	4
Course Outcomes: 1. Learners will be able to recognize definitions, nature, scope, characteristics and importance of settlement geography. (Knowledge) 2. Learners will be able to describe origin, growth, characteristics, distribution, structure and rural urban fringe of rural settlements. (Comprehension) 3. Learners will be able to discover concepts like origin, growth, classification and Hierarchy of rural settlements. (Application) 4. Learners will be able to analyses distribution of settlements in India			
Unit	Topics	No of Lectures	
I	• Origin of Rural Settlements 1.1 Origin and growth of settlements - evolution of rural settlements – Definition – Nature – Scope – Importance 1.2 Structure of house and building materials in India 1.3 House types and distribution in India 1.4 Regional variations in rural settlement patterns in India	12	
II	• Factors and Types of Rural Settlement 2.1 Factors affecting on Rural Settlements – Physical, Economical, Sociocultural Political 2.2 Types of Rural settlement on the basis of location, pattern, function, & spacing 2.3 Location – Wet point, Dry point, Pattern – Liner, Circular, Square, Fan, Net/Reticulum, Star/Radial, Arrow, Terrace pattern 2.4 Function – Agriculture, Fishing, Lumbering, Mining Spacing- Compact, Scattered	12	
III	• Hierarchy of Rural settlement 5.1 Fluvial,- Erosional and depositional features of River 5.2 Aeolian - Erosional and depositional features of wind 5.3 Glacial - Erosional and depositional features of glacier 5.4 Coastal - Erosional and depositional features of sea waves	12	
IV	• Changing Pattern of Rural Settlement 4.1 Changing pattern of Rural Land use – (Special Reference of local villages) 4.2 Rural Urban Fringe – Definition, significance and Concept,	12	

	Impact of Rural Urban Fringe - Examples in Maharashtra 4.3 Distribution and density of rural settlements in India 4.4 Sustainable development of rural settlements with Special Reference to India	
V	• IRDP and Rural Settlement 5.1 Rural problems and need of planning. 5.2 Integrated Rural Development Programme (IRDP) Definition, Nature, Scope & Importance 5.3 IRDP – Self Employment Programmes 5.4 Integrated Rural Development Programme - Problems of implementation	12
References: • ■ Dr. Shivram Thakur and Dr. Rajaram Patil (2016). Settlement Geography, Konkan Geographers Association of India. • ■ Sahu, B.K. (2003). Rural Development in India; Anmol Publishers, Delhi. • ■ Mandal, R. B. (2001) Introduction to Settlement Geography, Concept Publications, New Delhi. • ■ Singh, R. Y. (2005) The Geography of Settlement, Rawat Publication, Jaipur. • ■ Singh R. L.- Readings in Settlement Geography- The National Geographical Society of India. • ■ Settlement Geography, Hudson • ■ Hudson, Settlement Geography. • ■ Chattopadhyay, B.C. Rural Development in India, 1985, • ■ Government of India, 2007, Planning Commission, First Five Year Plan, Community Development and Rural Extension. New Delhi, Academic Foundation. • ■ Mukherji, B. 1967, Community Development in India, • ■ Kartar Singh., 1986, Rural Development: Principles, Policies and Management • ■ Government of India, Planning Commission Report. • ■ Geography Of India, By Majid Husain		

Course Code	SEM – V Paper – V-B	Credits	Lectures /Week
K23UAGEOSC151	Regional Planning and Development	4	4
Course Outcomes: After successful completion of this course, students would be able to 1. Explain the concepts and fundamental aspects of region, regionalisation, and planning 2. Understand the concept of regional planning with reference to surveys, planning regions, and growth poles 3. Understand the concepts, fundamentals, and theoretical aspects of regional development 4. Explain the nature of regional planning in India with reference to development disparities, multi-level planning, backward area development programmes, and planning process 5. Explain the nature of rural and urban development planning in India with the help of case studies			
Unit	Topics	No of Lectures	
I	Introduction to Region and Regional Planning 1.1 Region: Concept, Types, and Hierarchy 1.2 Regionalization: Concept and Methods - Delineation of Agricultural Regions and Industrial Regions in India as Examples 1.3 Meaning of Planning –Need, Concept, Nature, and Types of Regional Planning 1.4 Regional Planning: Principles and Approaches	12	
II	Understanding Regional Planning 2.1 Geography, Environment, and Regional Planning: Relationship and Issues 2.2 Role of Surveys in Regional Planning 2.3 Planning Regions: Characteristics and Need - Planning Regions of India as an Example 2.4 Growth Pole Theory and Regional Planning	12	
III	Understanding Regional Development 3.1 Concepts of Growth, Development, Underdevelopment – Indicators of Development 3.2 Regional Imbalance: Concept, Causes, and Consequences 3.3 Rostow's Model of Stages of Economic Growth and Friedman's Core and Periphery Model 3.4 Strategies for Regional Development	12	

IV	Regional Planning in India – I 4.1 Regional Disparities and Levels of Development in India 4.2 Multi-Level Planning in India 4.3 Backward Area Development Programmes: Hill Areas and Tribal Areas 4.4 Role of Five-Year Plans and NITI Aayog in the Planning Process of India	12
V	Regional Planning in India – II 5.1 Rural Planning in India: Integrated Area Development Planning (IADP) 5.2 Rural Development Planning: Case Study of Any Two Villages in Maharashtra 5.3 Urban Planning in India: Smart Cities Mission, and Atal Mission for Rejuvenation and Urban Transformation (AMRUT) 5.4 Urban Development Planning: Case Study of Mumbai Metropolitan Region	12

References:

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- Bishnoi Reet. (2022). Regional Planning and Development. AkiNik Publications, New Delhi.
- Chand Mahesh and Puri V.K. (2000). Regional Planning in India. Allied Publishers Ltd., Mumbai.
- Chandana R. C. (2016). Regional Planning and Development. Kalyani Publishers, New Delhi.
- Datt G., Mahajan A. (2016). Datt and Sundaram's Indian Economy. S. Chand Publishing, New Delhi
- Hall P. (2016). Urban and Regional Planning. Routledge, London
- Jiwan Janki. (2023). Regional Development and Planning. Rawat Publications, Jaipur.
- Khullar D. R. (2023). India A Comprehensive Geography. Kalyani Publishers. Ludhiana.
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- Misra R. P. (2002). Regional Planning. Concept Publishing Co., New Delhi
- Sundaram K. V. (1985). Geography and Planning: Essays in Honour of Prof. V. L. S. Prakasa Rao. Concept Publishing Co., New Delhi
- Sundaram K. V. (1989). Regional Planning and Development: Essays on Space, Society, and Development in Honour of Professor R. P. Misra. Heritage Publishers, New Delhi
- Tiwari R. C. (2016). Geography of India. Pravalika Publications, Allahabad.
- Tiwari R. C. (2020). Settlem

Course Code	Semester – V Peper: V-C	Credits	Lectures /Week
	GEOGRAPHY OF HEALTH	4	4
Course Outcomes: After successful completion of this course, students would be able to 01 Health geography is important for public health policy. 02 Health Geography have Spatial scale, globalization and urbanization. 03 Social and spatial inequalities in health 04 Approaches to geographic research 05 Health and place: a caution and recognition .			
Unit	Topics	No of Lectures	
I	Introduction to Geography of Health 1.1 Nature, scope, and evolution of Geography of Health 1.2 Conceptual background and components of Geography of Health 1.3 Significance and approaches of Geography of Health 1.4 Relation of Geography of health with other branches of social science	12	
II	The Pollution Syndrome 2.1 Air Pollution: Causes, Effects, and remedial measures 2.2 Water Pollution: Causes, Effects, and remedial measures 2.3 Radioactive Pollution: Causes, Effects, and remedial measures 2.4 Solid waste: Causes, Effects, and remedial measures	12	
III	Geography of Diseases 3.1 Types of diseases and their regional pattern 3.2 a) Case studies of communicable diseases – HIV – Aids b) Case studies of non-communicable diseases – Cancer 3.3 a) Case study of epidemic disease – Malaria b) Case study of pandemic disease - COVID-19	12	

	3.4 Climate change and Global health	
IV	Health and Environmental 4.1 Linkages of health, development & environment 4.2 Sustainable development Goals and Health 4.3 Population dynamics, urbanization, poverty and inequality 4.4 Migration and related health issues	12
V	Health Care Facilities 5.1 Health care facilities in India 5.2 Spatial Distribution of health care facilities in Maharashtra 5.3 Health care policies in India 5.4 Health Organizations: WHO, UNISEF, Red Cross Society and NGOs	12
References: Alice E. Marczewski and Michael Kamrin: Toxicology for the Citizen. B. Brockband, J.Cohrsson, and V.T. Covello: The Risk Assessment Manual: A Guide to Understanding and Using Health and Environmental Assessments Marilyn O. Ruiz: Geography of Disease Michael Emch, Elisabeth Dowling Root, and Margaret Carrel: Health and Medical Geography Fourth Edition Rhonda Humbird: AP Environmental Science - Part 1: The Living World WHO report (https://www.who.int/data/gho/data/themes/world-health-statistics) Misra R.P.: Geography of Health- A treatise on Geography of Life & Death in India, Concept Publishing Company Pvt. Ltd. Kanaro Pavlos and others (Ed.) : Spatial Analysis in Health Geography, Routledge.		

Course Code	Semester – V Peper No: VI	Credits	Lectures /Week
	TOOLS AND TECHNIQUES IN GEOGRAPHY	3	3
Course Outcomes • Understand and prepare different kinds of maps. • Recognize basic themes of map making. • Development of observation skills.			
Unit	Topics	No of Lectures	
I	Map Projections 1.1. Basic Concepts Definition, scale, direction, azimuth, graticule, great circle, true meridian, types of projections, choice of projections 1.2. Zenithal Polar Projections Equal Area, Equidistant 1.3. Cylindrical Projections - Equal Area, Equidistant 1.4. Conical Projections - One standard parallel, two standards parallel	09	
II	Interpretation of Topographical maps- S.O.I. Topographical Maps, 2.1. Basic elements of map and calculation or identifcation of relief, direction, bearing and distance, Area Calculation and demarcation of watershed 2.2. Study of physiography, drainage, and vegetation (one full toposheet of hilly and plateau region each) 2.3. Study of settlements size, pattern, utilities (one full toposheet of plains and urban region each) 2.4. Study of transport network (one full toposheet of plains and urban area each)	09	
III	Preparation of Thematic maps (Manually) 3.1. Preparation of a district thematic maps with actual data- Dot and Pictogram 3.2. Preparation of a district thematic maps with actual	09	

	dataChoropleth and Isopleth 3.3. Preparation of a district thematic maps with actual data- Located bar, located circle and pie chart	
IV	Weather map - reading and interpretation. 4.1 Weather Instrument information – Thermometer- BarometerHygrometer- Anemometer - Rain gauge 4.2 Weather Symbol reading 4.3 Weather Map – interpretation	09
V	Computer Section for practical - Google Earth 5.1. Download Google earth Pro (Free) 5.2. Identify your college location and its latitude and longitude with the help of Google earth pro 5.3. Practically use of Google earth tool -Add Placement, Add polygon, Add path, Add Image over layer, Historical image comparison, Show rules, Google Map, Evaluation profile	09
References: • KarlekarShrikant- Bhoogol shastratil Sanshodhan Paddhati, • ■ Monkhouse F.J. - Maps & Diagrams, Methuen and Co., London, 1971 (3rd Edition, Revised). • ■ NCERT - Textbook for Class-12, Practical Work in Geography Part II • ■ Peter A. Rogerson - Statistical Methods for Geography, Sege Publishers -2001 • Robinson A.H. - Elements of Cartography, Wiley • ■ Sarkar Ashish - Practical Geography, Orient Black Swan 2015 Sarkar Ashish Quantitative Geography, Orient Black Swan 2013 • ■ Singh R.L. & Singh P. B. - Elements of Practical Geography, Kalyani Publishers 2005 Stoddard Robert Field techniques and research methods in geography, Geography faculty publication http://digitalcommons.unl.edu/geographyfacpub/26 • ■ Thakur S. A.Konkan Geographer s publication (2016)		

Course Code	SEM – V Paper: VII	Credits	Lectures /Week
	POPULATION GEOGRAPHY	4	4
Course Outcomes: After successful completion of this course, students would be able to 1. Understand the nature, scope, importance approaches and relation with other social sciences of Population Geography 2. Understand the structure, growth, density and distribution of population in India and World. 4. Get knowledge about population theories. 5. Understand the causes, consequences and recent trends of migration in India 6. Understand the contemporary issues of population in India. 7. The components of frameworks; population dynamics; world population and development with special reference to India. 8. The Acquiring, handling and analyzing population data both at the grassroots level and secondary sources			
Unit	Topics	No of Lectures	
I	Introduction to Population Geography 1.1 Concept, definition, nature, scope, importance 1.2 Approaches to the study of Population Geography 1.3 Basic sources of population data 1.4 Population Geography and other social sciences	12	
II	Population Dynamics 2.1 Population growth in the world 2.2 Causes and effects of population growth in India 2.3 World: Population density and its determinants 2.4 Structure of population (Age, Sex and occupational)	12	
III	Theories of Population Growth 3.1 Demographic Transition Model 3.2 Malthus's Population Theory 3.3 Karl Marx's Population Theory 3.4 Concept of under population, over population & optimum population	12	
IV	Migration 4.1 Definition and Classification of Migration 4.2 Factors affecting on migration - Pull and push factors. 4.3 Consequences of Migration	12	

	4.4 Recent trend of migration in India	
V	Contemporary Issues in India 5.1 Ageing population and Increasing number of old age home. 5.2 Gender issues, Sexual assault, Domestic violence 5.3 Poverty and unemployment in India 5.4 Rapid urbanization and problem caused by urbanization in India	12
References: • Bhende A. and Kanitkar T.,(2000):Principles of Population Studies, Himalaya Publishing House • ChandnaR.C.andSidhuM.S.,1980:An Introduction to Population Geography, Kalyani Publishers • Chandna, R C (2006), Jansankhya Bhugol, Kalyani Publishers, Delhi • Chandna, R C (2014),: Geography of Population: Concepts, Determinants and Patterns, Kalyani Publishers, Delhi • Tiwari Ram Kumar (2015) Jansankhya Bhugol PravalikaPublication, Allahabad • Thakur, Patil, Datta, Pednekar, Roy, and Kamble (2016): Population Geography, Konkan Geographers Association in India • Roy. D. (2015) Population Geography, Books &Allied Publication, Kolkata • Datt, G. And Mahajan, A. (2016): “Datt and Sundaram’s Indian Economy”, S. Chand Publishing, New Delhi • Drezee J and Sen A.: “Indian Economic Development and Social Opportunity”, Oxford University Press, London		

Course Code	SEM – V Peper No – VIII-A	Credits	Lectures /Week
	GEOGRAPHY OF RESOURCES	4	4
Course Outcomes: After successful completion of this course, students would be able to 1. Understand concepts of different natural resources, its use, overuse, with its solution by natural resource management methods. 2. Appreciate the need for managing land and water resources for sustainable growth and development, managerial skills such as land evaluation and land classification. 3. Also, able to understand the causes and consequences of water stress and draw water conservation and management plans			
Unit	Topics	No of Lectures	
I	Introduction - Geography of Resources 1.1 Definition Nature and Scope of Geography of Resources 1.2 Significance of Geography of Resources 1.3 Classification of Instrumental Wealth 1.4 Factors Affecting on Instrumental Wealth	12	
II	Natural resources 2.1 Overuse and degradation of natural resources 2.2 Modern and traditional methods of resource utilization 2.3 Resource conservation and methods 2.4 Sustainable use of natural resources	12	
III	Water and Natural Vegetation 3.1 Distribution of Earth's Water Resources 3.2 Water Pollution and Water Conservation 3.3 Classification of Natural Vegetation in the world 3.4 Deforestation – Causes and Forest Conservation	12	
IV	Soil and Energy Resources 4.1 Factors affecting soil structure and soil formation. 4.2 Soil types and conservation of soil 4.3 Distribution of energy resources in world 4.4 Problems and Management of Energy Resources: Conventional and Non-Conventional	12	

V	Human Resources 5.1 Concept of human resource and Human Development Index (HDI) and its components 5.2 Factors affecting human resource development,. 5.3 Population: Growth and distribution 5.4 Role of human resource in socio-economic development	12
References: 1.Chandna R.C. (2014): Geography of Population, Kalyani Publishers, Ludhiana, India 2.Gautam Alka (2010) Environmental Geography: Sharda Pustak Bhavan, Allahabad 3.Gautam Alka: 2013: Advanced Economic Geography, Sharda Pustak Bhawan, Allahabad, India, Third Edition 4.Gautam Alka: Resource Geography, Sharda Pustak Bhawan, Allahabad, India, 5.Husain Majid, 2003: Resources Geography, Anmol Publications Pvt. Ltd. (2003) ISBN: 9788170418764 6.Khullar D. R. (2014) India: A Comprehensive Geography, Kalyani Publishers, ISBN-13: 978- 9327246759 7.Mondal P and Dalai (2017) Sustainable Utilization of Natural Resources: CRC Press (2017) ISBN 9781498761833 8.Singh Savinder (2015): Environmental Geography: Prayag Pustak Company, Allahabad 9.Singh Vipul (2012) The Human Footprint on Environment: Issues in India Macmillan Publishers India Pvt. Ltd, ISBN: 935-059-098-0 10.Verma C.L. (2014): Economic and Resource Geography, Forward Books; 1ST edition (2014) ISBN-10: 9381763534 11.Website: https://www.researchgate.net/publication/280298490_Resource_Geography 12.William A.: Nonfuel Minerals and the World Economy", Vogely, World Resources v Institute Book Yale University Pres		

Course Code	SEM – V Peper No – VIII-B	Credits	Lectures /Week
	Political Geography	4	4
Course Outcomes: After successful completion of this course, students would be able to ☛ To further the understanding of the students of uneven outcomes of political processes and the ways in which political processes are themselves affected by spatial structures. ☛ To understand the development of group identities such as nations and examine the linkages. between these identities and the political organization of territory. ☛ To develop an appreciation for the effects of boundaries on economic, political, and social processes. ☛ To study in relevant details theoretical concepts and challenges underpinning the study of geography and politics.			
Unit	Topics	No of Lectures	
I	Introduction of Political Geography 1.1. Political Geography: Definition, Nature and Scope 1.2 Development of Political Geography 1.3 Recent trends in Political Geography 1.4 Significance of Political Geography and approaches in Political Geography	12	
II	Evaluation of State and Nation-I 2.1 Concept of State 2.2 Factors affecting the State. 2.3 Centrifugal Forces in the States and its effects 2.4 Centripetal Forces in the States and its effects	12	
III	Evaluation of State and Nation –II 3.1 Concept of Nation, Nationalism 3.2 Deference of State-Nation 3.3 Concept and Types of Boundaries 3.4 Concept and Types of Frontiers	12	
IV	Frontiers and Boundaries 4.1 Differences Between Frontiers and Boundaries 4.2 Classification of International Boundaries 4.3 Boundaries of India 4.4 Characteristics and Problems of Boundaries	12	

V	Theories in Political Geography and world Geopolitics 5.1 Disputes of Indian borders with neighboring countries 5.2 Geo-politics of Indian Ocean 5.3 Hartland Theory – H.J. Mackinder 5.4 Rimland Theory – N. J. Spykeman	
References: ■ Adhikari S., 1997: Political Geography, Rawat Pub. Jaipur. ■ Cohen S.B., 1973: Geography and Politics in divided world. Oxford, New York. ■ Dixit R.D., 1982: Political Geography. Tata McGraw Hill, New Delhi. ■ Dwivedi R.L., 1996: Political Geography. Chaitanya Prakashan , Allahabad. ■ Moor R., 1981: Modern Political Geography. McMillan, London. ■ Pounds N.G., 1972: Political Geography. McGraw Hill, London. ■ Taylor P., 1998: Political Geography, Prentice Hall. ■ Adhikari, S. (2015): “Political Geography”, Rawat Publications, Jaipur ■ Adhikari, S. (2011): “Political Geography of India: A Contemporary Perspective”, Sharda Pustak Bhawan, Allahabad ■ Dikshit R. (1985): “Political Geography: A Contemporary Perspective” McGraw, Hill, New Delhi ■ Dikshit, S. (1993): “Electoral Geography of India”, Vishwavidyalaya Prakashan, Varanasi ■ Dwivedi, R. (1996): “Political Geography” Chaitanya Prakshan, Allahabad ■ Jones, M. (2004): “An Introduction to Political Geography: Space, Place and Politics”, Routledge ■ Muir, R. (1995): “Modern Political Geography”, McMillan, London ■ Painter, J. and Jeffrey, A. (2009): “Political Geography”, Sage Publications ■ Sinha, M. (2007): “Electoral Geography of India”, Adhyayan Publications and Distributers,		

Course Code	SEM – V Peper No – IX	Credits	Lectures /Week
	GEOSPATIAL TECHNOLOGY	3	3
Course Outcomes Have knowledge of the principles of remote sensing, sensor resolutions and image referencing schemes. • Interpret satellite imagery and understand the preparation of false color composites from them. • Training in the use Geographic Information System (GIS) software for contemporary mapping skills. • Analysing and interpreting remotely sensed satellite images and aerial photographs in order to understand topographical and cultural variations on the Earth's surface. Conducting field excursions and preparation of field report on research on problem in different areas of India Apply GIS to the preparation of thematic maps.			
Unit	Topics	No of Lectures	
I	Remote Sensing - I 1.1 Geospatial Technology: Concept, Components and Importance 1.2 Remote Sensing: Concept, Process and Geographical Applications 1.3 Electromagnetic Energy, EMR and EMS - Spectral Reflectance and Spectral Signature or Curve - Platforms, Sensors and Resolution 1.4 Elements of Visual Image Interpretation - Mapping of Thematic Layers and Visual Image Interpretation of Physical and Manmade Features	09	
II	Remote Sensing - II 2.1 Digital image analysis: land use and landform classification, 3D views of DEM 2.2 Aerial Photographs: Concept, Process and Types 2.3 Interpretation of Aerial Photographs 2.4 Advanced Remote Sensing Technology - Use of	09	

	Bhuvan website	
III	Global Positioning System 3.1 GPS: Concept, Segments, Applications 3.2 Types of GPS GPS Data Accuracy and Errors 3.3 Factors Affecting GPS Data - Global Navigation System 3.4 Ground Survey and Demarcation of Point, Line and Polygon Features with GPS Device Transfer GPS Data to Computer with Software's like -Easy GPS	09
IV	Geographic Information System I 4.1 GIS: Concept, Components and Applications - Map Projection and Coordinate System 4.2 GIS Data Acquisition and Types 4.3 Importing Image into GIS Software and Geo referencing 4.4 Creating Layers by Digitization of Point, Line and Polygon Features	09
V	Geopolitics Geographic Information System II 5.1 Functions of Database Creation Input, Editing and Linking 5.2 Spatial Database Analysis: Overlay, Merge, Query 5.3 Using Map-Composer for Map Layout and Design 5.4 Preparation of Thematic Maps	09

References:

Afzal Sharieff and et. al. (Ed.) (2010): An Introduction to Remote Sensing, SARUP Book Publishers Pvt. Limited, New Delhi.

Anson, R. W. and Ormeling, F. J., (Ed.) (1993): Basic Cartography for Students and Technicians, Vol.I, International Cartographic Association and Elsevier Applied Science Publishers, London.

American Society of Photogrammetry (1983): Manual of Remote Sensing, ASP PalisChurch,V.A.

. Agrawal, N.K.(2006), Essentials of GPS (Second Edition), Book Selection Centre, Hyderabad

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. Central Board of Secondary Education (New Delhi): Geospatial Technology Textbook, Class XI and XI

Semester VI

Course Code	SEM – VI Paper: IV	Credits	Lectures /Week
	Introduction to Climatology and Oceanography	4	4
Course Outcomes: To provide students with basic understandings of climatology and oceanography To enable us to understand the basic concepts of weather and climate. To gain essential background for further studies in weather and climate To introduce the fundamentals of atmospheric phenomena, global climate, and climate change. To gain essential background of origin and development of oceanography To enable us to understand the basic concepts of ocean floor, temperature and salinity of ocean water. To introduce the fundamentals of various movements of ocean water, marine ecosystem, pollution and the influence of ocean			
Unit	Topics	No of Lectures	
I	Introduction to Climatology 1.1 Introduction of Climatology - Concept and elements of weather and climate 1.2 Evolution of atmosphere its composition and structure 1.3 Insolation and heat budget of the earth 1.4 Vertical and horizontal distribution of temperature	12	
II	Air Pressure, Atmospheric Circulation, Precipitation 2.1 Measurement of air pressure and distribution of pressure belts 2.2 Winds: global, regional, and local 2.3 Upper air circulation - Jet stream 2.4 Process of condensation and precipitation	12	
III	Special Weather Phenomena 3.1 Cyclone – types and origin, structure, global distribution and associated weather.	12	

	3.2 Tornados: Origin, structure, distribution, and associate weather 3.3 Anti-cyclones: Origin, structure, global distribution, and associate weather 3.4 Global warming and its impact on Weather	
IV	Introduction to Oceanography 4.1 Origin and Development of Oceanography, Branches of oceanography 4.2 Ocean floor relief and its characteristics 4.3 Composition of ocean water, distribution of salinity and affecting factors 4.4 Ocean waves formation and types	12
V	Concept of tides, Ocean currents and marine pollution 5.1 Concept and types of Tides 5.2 Ocean Currents – types and their effects 5.3 Coral reefs and their importance 5.4 Marine pollution and its impact on marine ecosystem	12

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Course Code	SEM – VI Paper: V	Credits	Lectures /Week
	Geography of Urban Settlement	4	4
Course Outcomes: 1) The students were known the importance of urban settlements through urban geography. 2) The students understood the types of Urban Settlements, Site and Situations. 3) The students were familiar with an idea of relationship between human activities and urban development. 4) Detail understanding of students regarding present urban problems and students are capable of handling of present problematic situations in urban areas. 5) The students are developed as a good urban planner and environmental conservator.			
Unit	Topics	No of Lectures	
I	Introduction to Geography of Urban Settlements 1.1 Urban Geography - Definition, Nature, and Scope. 1.2 Approaches of Urban Geography. 1.3 Urban Settlement Geography relation with Other Disciplines subjects 1.4 Factors affecting on growth and Development of Urban settlement	12	
II	Urban Settlements 2.1 Site and Situation of Urban Settlements 2.2 Patterns of Urban Settlements – Nuclear, Linear, Rectangular, Circular, Star related other patterns. 2.3 Hierarchy of Urban Settlements 2.4 Functional Classification of Towns	12	
III	Urbanization 3.1 Urbanization - Concept, origin and growth of urbanisation with special reference to India 3.2 Cities and Its Umland – Concept, Determinants of Umland of Indian Cities. 3.3 The Central Business District (C.B.D) – (characteristics, Classification, Delimitation, Parameters)	12	

	3.4 Contemporary Urban Issue / Urban Problems	
IV	Theories of Urban Morphology 4.1 Central Place Theory 4.2 Concentric Zone Theory 4.3 The Sector Theory 4.4 The Multiple Nuclei Theor	12
V	Urban Planning 5.1 Town Planning - Concepts, Aims, Need of Town Planning. 5.2 Case Studies of Planned Cities -New Mumbai, Chandigarh. 5.3 Case Studies of Metropolitan Areas – Delhi, Mumbai and Kolkata 5.4 Urban Policies and Problems of Town Planning in India	12

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Course Code	SEM – VI Paper: V- B	Credits	Lectures /Week
K23UAGEOVC241	Geography of Transport	2	2
Course Outcomes: 1) Students will learn about the role of transport in entire economic and social processes. 2) This course aims to make students understand the locational advantage of different economic and social institutes based on transport principle. 3) They are made aware of the role of public transport in addressing the problems of congestion and air pollution. 4) This understanding may help them in formulating plan for regional development and economic regeneration by proper transport planning.			
Unit	Topics	No of Lectures	
I	Introduction to Transport Geography 1.1 Definition Nature & Scope of Geography of Transport 1.2. Importance of Geography of Transport 1.3. Definition of Distance and its types, Factors affecting on Transportation 1.4. Phases of growth and development of different modes of transport	12	
II	Transport Network System 2.1. Transport network system – structure and properties. 2.2. Application of graph theory measures 2.3. Location of routes and efficiency of network 2.4. Bases of spatial interaction, complementary intervening opportunity and Transferability.	12	
III	Evolution of Modes of Transport 3.1. Evolution of transport network and their environment 3.2. Transport cost, Principles of transport cost fixation, 3.3. Comparative cost advantage by different modes 3.4. Factors influencing comparative cost structures and locational responses	12	
IV	Theoretical Framework and Impact of Transport 4.1 Measures and Indices of connectivity and accessibility 4.2 Transportation Models: Traffic congestion Model and Spatial Flow Models, Gravity Model	12	

	4.3 Impact of Transport on environment & Tourism Development 4.4 Issues associated with road, rail, water and air transportation	
V	Urban Transport Policy and Planning 5.1. Transport development in developing countries, urban, transportation: growth and problems of urban transportation. 5.2. Challenges and issues of Urban Transport - Transport and environmental degradation; vehicular pollution and congestion, 5.3. Urban Land Use and Transportation, 5.4. National Highway Development and Transport Planning in India.	12
References: 1. Chorley R.J. & Haggett P. (1967): Models in Geography Methuen & Co. London. 2. Hagget, F and Chorley, R.J. Network Analysis', Edward Arnold, London, 1968. 3. Hay, A.: Transport Economy, MacMillan, London, 1973. 4. Hoyle, B.S. (ed.): Transport and Development, MacMillan, London, 1973. 5. Hurst, M.E.(ed.) (1974): Transportation Geography, McGraw-Hill. 6. Raza, M. and Agrawal Y.P.: Trans port Geography of India, Concept. New Delhi, 1985. 7. Robinson H & Bamford C.G. : Geography of Transport Macdonald & Evans., London 1978. 8. Saxena, H. M. (2010): Transport Geography, Rawat Publications, Jaipur 9. Taffe, E.J. & Gauthier (Jr.) H.L.: Geography of Transportation, Prentice-Hall, Englewood Cliffs, N.J., 1973. 10. Ullman E.L.: American Commodity Flow University of Washington Press 1957.		

Course Code	SEM – VI Paper: V- C	Credits	Lectures /Week
	Geography of Disaster Mitigation and Management	4	4
Course Outcomes: Understand the nature of hazards and disasters. Assess risk, perception, and vulnerability with respect to hazards. • Prepare hazard zonation maps. Assessing the nature, impact, and management of major natural and man-made hazards affecting the Indian subcontinent			
Unit	Topics	No of Lectures	
I	Meaning & Concept of Disaster & Hazard 1.1 Concept of Disaster, Hazard, Vulnerability and Risks 1.2 Typology of hazards & Disasters-Natural Disasters and Man-made Disaster. 1.3 Impacts of Disaster-Socio-economic and Political 1.4 Need of Disaster Management in India	12	
II	Disaster Management: Method & Approaches 2.1 Disaster Management: Meaning & Concept 2.2 Disaster Management: Historical Perspective 2.3 Disaster Management: Methods & Approaches 2.4 Pre & Post -Disaster Stage of Management	12	
III	Disaster Management & Organizations 3.1 Role of National Organization for Disaster Management 3.2 Role of International Organization for Disaster Management –UNISDR, INSARAG, Red Cross 3.3 Role of NGOs, Community & social media in Disaster Management 3.4 Need & Challenges faced by various organizations	12	
IV	Natural Disaster and its Management in India 4.1 Earthquake Distribution, Causes, Effects, Management 4.2 Flood-Distribution, Causes, Effects, Management 4.3 Cyclone- Distribution, Causes, Effects, Management 4.4 Landslides- Causes, Effects, Management	12	
V	Anthropogenic Disaster and its Management in India	12	

	5.1 Industrial Hazard-Causes, Effect, and management 5.2 Terrorism – Causes, effect, and management 5.3 Deforestation - , Causes, Effect and management 5.4 Accidents – Causes, Effect and management	
References: 1. Coppola,D.P(2011):Introduction to International Disaster Management.Elesvier, ButterworthHeinemann 2. Dasgupta R. (2007) Disaster Management and Rehabilitation, Miital Publication. New Delhi 3. Govt.Of India: Disaster Management in India,Ministry of Home affair, New Delhi 4. Murthy,D.B.N (2008) : Disaster Management, Deep & Deep Publications Pvt. Ltd., New Delhi 5. Singh,Savindra and Singh, Jeetendra (2016):Disaster Management, Pravalika Publications, Allahabad 6. Management of Man Made Disaster - S. L. Goel - Deep & Deep Publication PVT. LT		

Course Code	SEM – VI Paper: VI	Credits	Lectures /Week
	TOOLS AND TECHNIQUES IN GEOGRAPHY FOR SPATIAL ANALYSIS-II (Practical)	3	3
Course Outcomes: ■ Learn the significance of statistics in geography. Understand the importance of use of data in geography ■ Recognize the importance and application of Statistics in Geography ■ Interpret statistical data for a holistic understanding of geographical phenomena. Know about different types of sampling. ■ Develop an idea about theoretical distribution. ■ Learn to use tabulation of data. ■ Gain knowledge about association and correlation.			
Unit	Topics	No of Lectures	
I	Nature of data and central tendency 1.1. Meaning and types of data, variable, observation, value, simple, discrete data and continuous data 1.2. Frequency Distribution, Histogram, Frequency Polygon and Ogive. 1.3. Measures of Central Tendency- mean, median and mode	09	
II	Dispersion and Deviation 2.1. Mean Deviation and Quartile Deviation 09 2.2. Standard Deviation 2.3. Moving Averages (3 years and 5 years)	09	
III	Correlation, Regression & Hypothesis Testing 3.1. Calculation of correlation coefficient - Pearson's and Spearman's methods 3.2. Regression analysis 3.3 Systematic and random Sampling with Point, Line and Area types	09	
IV	Surveying 4.1 Plane Table Surveying 4.2 Abney level Surveying 4.3 Prismatic compass surveying	09	
V	Field work in Geography Study tour and report writing or Village Survey and	09	

	report writing.	
References: ■ Karlekar Shrikant- Bhoogol shastratil Sanshodhan Paddhati, ■ Monkhouse F.J. - Maps & Diagrams, Methuen and Co., London, 1971 (3rd Edition, Revised). ■ NCERT - Textbook for Class-12, Practical Work in Geography Part II ■ Peter A. Rogerson - Statistical Methods for Geography, Sege Publishers -2001 - Robinson A.H. - Elements of Cartography, Wiley ■ Sarkar Ashis - Practical Geography, Orient Black Swan 2015 - Sarkar Ashis Quantitative Geography, Orient Black Swan 2013 ■ Singh R.L. & Singh P. B. - Elements of Practical Geography, Kalyani Publishers 2005 - Stoddard Robert Field techniques and research methods in geography, Geography faculty publication http://digitalcommons.unl.edu/geographyfacpub/26		

Course Code	SEM – VI Paper: VII	Credits	Lectures /Week
	Economic geography	4	4
Course Outcomes: 1) Understand the concept of economic activity, factors affecting location of economic activity. Gain knowledge about different types of Economic activities. 4) Assess the significance of Economic Geography, the concept of economic man and theories of choice. 6) Analyze the factors of location of agriculture and industries. 7) Understand the evolution of varied types of economic activities. 8) Map and interpret data on production, economic indices, transport network and flows.			
Unit	Topics	No of Lectures	
I	Introduction to Economic Geography 1.1 Definition, nature, scope and importance of Economic Geography 1.2 Approaches and chronological development 1.3 Branches and relationship with social sciences 1.4 Recent themes and concept: agglomeration economics	12	
II	Major Economic Activities 2.1 Meaning, classification of economics activities 2.2 Primary Economic Activities: Fishing, animal husbandry and agriculture: types, characteristics and influencing factors and major area. 2.3 Secondary activities: Meaning, types and Characteristics. 2.4 Territory and quaternary activities: Meaning, Characteristics	12	
III	Major Industries and Industrial Regions 3.1 Locational factors and locational theory 3.2 Major Industries: Iron and Steel, Textile and Sugar Industries 3.3 Industrial Region: India and World 3.4 Industrial Development in India and World	12	
IV	Transportation and Communication 4.1 Meaning, importance of transportation and communication 4.2 Means and modes of transportation	12	

	4.3 Influencing factors of transportation development. 4.4 Transport patterns, flow theory and gravity model	
V	International Trade and Trading Organizations 5.1 Meaning, types and factors of trade development 5.2 Theories of international trade 5.3 Major trading organizations and blocks 5.4 Trade policies of India and China.	12
References: ■ Alka Guantam (2015): Advanced economic geography Sharda Pustak Bhavan ■ R.knowled and J. Wareing (2010) Economic and Social geography “Rupa publication India pvt. ltd. New Delhi” ■ Alexander J.W. (1963) Economic Geography “Englewood Cliff ■ Bale J. (1984): The location of manufacturing industry oliver and boyd idinburgh ■ Behrman J.N. (1967) industrial policies: international restructuring and transnational, Lexington ■ Brilton J.N.H (1991) Regional Analysis and economic geography : A case study of manufacturing in the Bristol region London ■ Chapmen K. and Devid W. (1991) Industrial Location, Oxford.		

Course Code	SEM – VI Paper: VIII- A	Credits	Lectures /Week
	BIOGEOGRAPHY	4	4
Course Outcomes: ☛ Understand the varied ecosystems and classify them. ☛ Recognize the significance of biogeochemical cycles and biodiversity. ☛ Comprehend the devastating impact of deforestation. ☛ Identify soil types and derive their ph.			
Unit	Topics	No of Lectures	
I	Introduction to Biogeography 1.1 Biogeography-Concept, definition, nature, and scope 1.2. Historical development and branches of Biogeography 1.3. Approaches in Biogeography 1.4. Importance of Biogeographic studies	12	
II	Ecosystem and Biosphere 2.1. Ecosystem: Concept, meaning and types 2.2. Components of ecosystem and ecosystem productivity 2.3. Biosphere: Concept, meaning, components 2.4. Environment controls -	12	
III	Plant Community 3.1. Concept of plant community and classification of plants 3.2. Biotic succession and climax vegetation 3.3. Major plant formation and biomes- Tropical 3.4. Major plant formation and biomes- Temperate	12	
IV	Animal & Marine Biogeography 4.1. Geography of animal communities 4.2. Zoogeographical regions 4.3. Migration of Animals 4.4. Types of ocean habitats; Island Biogeography, Estuarine Biogeography	12	
V	Biodiversity 5.1. Biodiversity: meaning, importance and types 5.2. Causes of Biodiversity loss 12 5.3. Biodiversity conservation 5.4 Biosphere reserves of India	12	

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Course Code	SEM – VI Paper: VIII- B	Credits	Lectures /Week
	SOCIAL AND CULTURAL GEOGRAPHY	4	4
Course Outcomes: 1. Understand the scope and content of socio-cultural geography 2. Understand the concept of cultural hearth and realm, cultural diffusion, diffusion of regions. 3. Develop an understanding of cultural segregation and cultural diversity, technology and development 4. Learn about the different races and racial groups of the world 5. Identify the socio-cultural space and regions of India 6. Understand the indicators of social welfare and wellbeing			
Unit	Topics	No of Lectures	
I	Introduction to Social and Cultural Geography 1.1 Social Geography: Concept, Nature, and Scope 1.2. Cultural Geography: Concept, Nature, and Scope 1.3. Approaches: Possibilistic, Behavioural, Radical and Welfare, Modern and Postmodern 1.4. Social-cultural Space and Regions with Special Reference to India	12	
II	Social and Cultural Structures 2.1. Races, Caste, Ethnicity: Types, Characteristics and Distribution 2.2. Religions: Traits and Distribution 2.3. Tribes: Types, Characteristics and Distribution 2.4. Languages: Distribution of Major languages families	12	
III	Socio-cultural Processes and Wellbeing 3.1. Processes of Social Change: Modernization and Globalization – Positive and Negative Impact 3.2. Concept and Indicators of Social Welfare and Wellbeing Happiness Index 3.3. Cultural Realms (Regions) and Diffusion: Cultural Convergences and Divergences 3.4. Cultural Ecology and Heritage - World Heritage Movements	12	

IV	Socio-cultural Development and Problems in India 4.1. Socio-cultural Development: Indicators and Measurement 4.2. Social Stratification and Exclusion – Causes and Effects 4.3. Socio -cultural Challenges and Problems in Rural and Urban area 4.4. Problems Related to Health and Education - Programs or Policies	12
V	Biodiversity 5.1 Cultural Heritage Preservation: Efforts of Conservation 5.2. Social Movements: Environmental, Labour, Dalit, Tribal, Women and Farmers 5.3. Tribal Development: Programmes and Policies 5.4 Women Empowerment: Programmes and Policies	12

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Course Code	SEM – VI Paper: IX	Credits	Lectures /Week
	Research Methodology in Geography (Practical)	3	3
Course Outcomes: Have expertise in identification of area of study, methodology, quantitative and quantitative analysis, and conclusions to be drawn about the area – fundamental to geographical research. Handle logistics and other emergencies on the field. Develop skills in photography, mapping, and video recording.			
Unit	Topics	No of Lectures	
I	Research Methodology in Geography 1.1 Research in Geography: Concept, Types, Steps and Significance 1.2 Research Methodology: Meaning and Types (Qualitative and Quantitative) 1.3 Defining the Research Problem: Meaning, Need and Techniques 1.4 Research Designs: Concept, Need and Features	09	
II	Data Collection and Processing 2.1 Sample Design, Measurement and Scaling 2.2 Data Collection in Geography: Types (Primary and Secondary) and Methods (Observation, Questionnaire, Schedule, Interview, etc.) 2.3 Role of Internet in Research: Online Research Referencing (Shodhganga, INFLIBNET, ResearchGate, Academia, Mendeley, etc.) 2.4 Data Processing: Editing, Coding, Classification and Tabulation	09	
III	Data Analysis 3.1 Data Analysis: Meaning, Significance and Types 3.2 Using MS-Excel and SPSS for Data Analysis: Graphical, Descriptive and Inferential Statistical Representation 3.3 Hypothesis: Meaning, Types, Levels of Significance, Degrees of Freedom and Errors 3.4 Statistical Techniques for Hypothesis Testing	09	

IV	Digital Data Analysis and Research Report Writing 4.1 Techniques of Spatial and Non-spatial data Analysis in GIS Software (QGIS) 4.2 Techniques of Data Analysis in Satellite Image Processing Software (SAGA) 4.3 Basics of Research Report Writing: Layout, Structure, Language, Bibliography, References and Footnotes 4.4 Ethics in Research: Plagiarism	09
V	Preparation of Research Report 5.1 Research Report on any One Theme in Physical Geography or Human Geography	09

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Evaluation Scheme for Third Year (UG)

I. Internal Evaluation for Theory Courses – 40 Marks

1) Continuous Internal Assessment (CIA) Assignment –

Tutorial/ Case Study/ Project /Presentations/ Group Discussion / Ind. Visit. – 20 marks

2) Continuous Internal Assessment (CIA) ONLINE Unit Test – 20 marks

II. External Examination for Theory Courses – 60 Marks

Duration: 2 Hours

Theory question paper pattern:

Question	Based on	Marks
Q.1	Unit I	12
Q.2	Unit II	12
Q.3	Unit III	12
Q.4	Unit IV	12
Q.5	Unit V	12

- All questions shall be compulsory with internal choice within the questions.
- Each Question may be subdivided into sub questions as a, b, c, d, etc. & the allocation of Marks depends on the weightage of the topic.

NOTE: To pass the examination, attendance is compulsory in both Internal & External (Theory + Practical) Examinations.

Evaluation Scheme for Third Year (UG)

I. Internal Evaluation for Theory Courses – 20 Marks

1) Continuous Internal Assessment (CIA) Assignment - Tutorial/ Case Study/ Project /Presentations/ Group Discussion / Ind. Visit. – 10 marks

2) Continuous Internal Assessment (CIA) ONLINE Unit Test – 10 marks

II. External Examination for Theory Courses – 30 Marks

Duration: 1 Hours

Theory question paper pattern: All questions are compulsory.

Question	Based on	Marks
Q.1	Unit I	15
Q.2	Unit II	15

- All questions shall be compulsory with internal choice within the questions.
- Each Question may be subdivided into sub questions as a, b, c, d, etc. & the allocation of Marks depends on the weightage of the topic.

NOTE: To pass the examination, attendance is compulsory in both Internal & External (Theory + Practical) Examinations