SHRI GURU RAM RAI UNIVERSITY

(Estd. by Govt. of Uttarakhand, vide Shri Guru Ram Rai University Act no. 03 of 2017)

Syllabus of Pre- PhD Geography

Effective from Academic Session 2018 &

Revised in (2024)

Pre- PhD. Geography Semester I

Core Courses

EXAM STRUCTURE GEOGRAPHY – TOTAL CREDITS

SEMESTER- I

Code	Title of Course/Paper	Credit
PGGC _102	Geographical Thought: Concepts and Issues	04

Electives Course

Code	Title of Course/Paper	Credit
PGGE_ 101	Advance Geomorphology and Hydrology	04
PGGE_ 102	Environment and Natural Resource Management	04
PGGE _ 103	Human and Economic Geography	04
PGGE_104	Population Geography	04
PGGE_105	Settlement Geography	04
PGGE_106	Regional Planning	04
PGGE_107	Rural Landuse and Agricultural Geography	04
PGGE_108	Biogeography	04
PGGE_109	Cultural Geography	04
PGGF- 101	Field tour, workshop & seminars	04
	Total	16

PRE-PH.D. PROGRAMME (ONE SEMESTER COURSE)

GEOGRAPHY

There will be two core courses which carry 4 credits and one elective course which shall carry 4 credits . The students shall have to opt one course from the list of elective courses. 4 credits are for Field tour, workshop & seminars

Course I : Geographical Thought: Concepts and Issues PGGC _101

Course Outcome

Paper code	Paper name	Course outcome
PGGC_ 101	Geographic Thought	CO1- Students will be recall the definition, scope, and branches, concept and theories of geography. CO2- Students will be able to explain the importance, approaches and theories in geography. CO3- They will be able to classify world Geography into various historical time period. CO4-. Now they will be identifying various world famous geographical scholars of different historical time period. CO5-.They will be able to prepare an assignment on new quantitative geography on macro-structure of space-time organisations.

Unit I : Nature and evolution of geographic ideas in brief; The general characteristics of geography in ancient period; Thought of varenius and Kant; critical analysis of contributor made by Humboldt and Ritter; The general course of geographic thought in the second half the 19th century and the first half of the 20th century.

Unit II : The development of dualism in Geography; Impact of Darwin's Theory of geographic thought; The development of concepts in Geography: Determinism, Possibilism and Human ecology, Applied Geography, areal differentiations and concept of distribution.

Unit III : Relations between systematic sciences and systematic geography; Development of general classifications and generic principles in Geography; concept of region and regionalism; Regions of different types and orders; Methods of delimitation of regions; concept of core and marginal areas; concept of cultural landscape & concept relating to city-country functional relationship.

Unit IV : Behavioural, humanistic and radical approaches in Geography; Role of Quantification and systematic analysis in the development of unified theory in Physical and Human geography. Ecological study in geography as man-environment system; New geography as general spatial systems theory based on macro-structure of space-time organisations.

Readings Recommended:

1. Ackerman, E.A. Geography as a Fundamental Research Discipline
2. Chorley, R.J. (ed.) Direction in Geography
3. Dube, B. Geographical Concepts in Ancient India
4. Hartshorne, R. Perspective on the Nature of Geography
5. Hartshorne, R. The Nature of Geography
6. Holt-Jensen, A. Geography-Its History and Concepts
7. James, P.E. New View points in Geography
8. Harvey, D Explanation in Geography

ELECTIVE COURSE

The candidates are required to opt any one group of courses consisting of two papers from the following groups of courses.

Geomorphology and Hydrology **PGGC _101**

Paper-1

Course Outcome

Paper code	Paper name	Course outcome
PGGC _101	Geomorphology and Hydrology	CO1- Students will be recall the definition, scope, and branches of Geomorphology. CO2- Students will be able to explain the concept of Geomorphology. CO3- They will be able to classify world geomorphic region. CO4-. Now they will be identifying various type of landforms develop by various process. CO5-.They will be able to prepare an assignment on the application of Geomorphology in practical world and region geomorphology. CO6- Now they can be formulates new methods for the study of morphometric analysis and hydrological provinces of India.

Unit- I : Definition, Scope and significance of geomorphology, concepts and methods in contemporary geomorphology; recent, trends in geomorphology; Techniques of geomorphologic mapping and topographical analysis, Terrain classification.

Unit II : Major processes of landscape sculpture under different climatic environments: Mass movement, hill slope erosion, fluvial, glacial and periglacial processes and resulting landforms. Morphometry liner, areal and relief aspect. Drainage basin analysis; serial and areal representation of morphology.

Unit III : Landscape development, structural landforms, slope analysis, application of geomorphology in resource utilization and environmental management. Applied geomorphology; Regional geomorphology with special reference to Uttarakhand Himalaya.

Unit IV : Meaning, Scope and practical utility of hydrology, sources of hydrological data; hydrograph analysis; Water balance; Man's influence on the hydrologic cycle; drainage basin studies; hydrological provinces of India.

Readings recommended:

1. King, C.A.M. — Techniques in Geomorphology
2. Thornbury, W.D. — Principles of Geomorphology
3. Tricart, J. — Structural Geomorphology
4. Pal, S.L. (1986) — Geomorphology of River Terraces along Alaknanda Valley, Garhwal Himalaya
5. Thorn, Colin, E. — Introduction to Theoretical Geomorphology
6. Singh, T.V. (1990) — Geography of the Mountains (ed.)
7. Ward, R.C. — Principles of Hydrology
8. Wilson, E.N. — Engineering Hydrology
9. Wister & Beater — Hydrology
10. Cooke, R.V. & Doorn, K.J.C. — Geomorphology in Environmental Management

Environment and Natural Resource Management **PGGC _102**

Paper-2

Course Outcome

Paper code	Paper name	Course outcome
PGGC _102	**Environment and Natural Resource Management**	CO1- Students will be recall meaning and definition of environmental geography. CO2- Students will able to explain environmental issues and sustainability. CO3- Students will be able to illustrate different types of environments, ecological setting and their issues and challenges with the concept of sustainability. CO4- Now they will be able to examine role of environmental conservation and management. CO5-. They will be able to evaluate the cause, consequences and remedy for environmental crises on macro, micro and meso level. CO6-. They will be able to prepare the project on environment and issues related to environment.

Unit I : Nature, Scope and Significance of environmental study, components and functions of ecosystem, major ecosystems of earth.

Unit II : Environmental crisis, global climatic change, shrinking of glaciers, Elnino effect, Desertification, Natural Hazards, Cultural hazards, environmental issues in mountains with special reference to Uttarakhand.

Unit III : Concepts and principles of natural resources, Geo-informatics for natural resource management, Digital Image Processing, GIS, Concept of Watershed and Watershed management, Natural Resource Management and Strategies.

Unit IV : Community based natural resource management, Eco-services, success stories in Uttarakhand (Natural Resource Management). Natural resources and sustainable development, Biodiversity assessment and conservation.

Readings Recommended

1. Environmental Change and Sustainable Development in the New Millennium by

Dr. Mohan Singh Panwar, published by Research India Press, Sangam Vihar, New Delhi- 110062.

2. Medicinal Plants and Sustainable livelihood by Mohan Singh Panwar, Sunesh Kr. Sharma and R.B. Singh, published by RK Books, Daryaganj, New Delhi – 110002.

3. Himalayan Parvat Mein Sansadhan Prabhandhan by Kaushal Kumar Sharma, Suresh Kumar Bandooni and Virender Singh Negi published by Research India Press, Sangam Vihar, New Delhi- 110062.

4. Studies in Himalayan Ecology and Development Strategies by Tejvir Singh and Jagdish Kaur published by the English Book Sore, New Delhi- 110001.

5. Evaluation of Watersheds in India by G. Sastry et al., published by Scientific publishers, Jodhpur- 342001.

6. Rural Poverty Assessment and Livelihood Strategies by M.Biswanath et al. published International Book Distributors, Dehradun-248001.

7. The Holi Himalaya, A Geographical Interpretation of Garhwal, by Nitya Nand and Kamlesh Kumar, published by Daya publishing house, Delhi-110006.

8. Watershed Management in Himalaya; Concept and Strategy by B.P. Pandey et al. published Gyanodyaya Prakashan, Nainital-263001.

Human and Economic Geography **PGGE _103**

Paper-3

Course Outcome

Paper code	Paper name	Course outcome
PGGE _103	**Human and Economic Geography**	CO1- Students will recall the concept of cultural and economic region of the world. CO2- Now they will be able to explain the cultural and economic region of the world CO3- They can classify Indian cultural and economy region on various level. CO4-. They will be able to examine indicators of economic development and role of various economic organization in the world. CO5-. Now they will be able to evaluate the responsible reason and results of different economy division in the world. CO6- They can be write about socio-economic issues and policies in India.

Unit I : Man as resources; Principles of Human Geography, Man and his environment; concepts of cultural landscape and economic landscape.

Unit II : Cultural and economic regionalization (Global and Indian Context). Human development index and its components, Growth and distribution and density of population

Unit III : Level of Economic development; Indicators of economic development; Indian economy and SAPTA, EV, ASEAN, OPEC and WTO, Problems of developed and developing countries.

Unit IV : Socio-Economic issues and policies (Indian Context). Locational Theories – Agriculture (VonThunen) and Industrial (Weber).

Readings Recommended

1. Brunches Human Geography, R. and MC Nally, Chicago

2. Huntington	Human Geography, Asia Publishing House, Bombay
3. Zimmeerman	World Resources
4. Hagett, Peter	Locational Analysis in Human Geography, Edern Arnold, London
5. Jagdish Singh	Arthik Bhoogol Ke mool tatva (Hindi), Gyanodaya Prakasha, Gorakhpur
6. Semple, E.C.,	Influences of Geographic Environment, Henry Holf, New York
7. Spencer J E and Thomas, WC	Cultural Geography, Willy and Sans, New York
8. Carter, G.F.	Man and Land- A Cultural Geography, New York
9. Maurya SD and G Dies	Social Environment of India; Chugh publications, Allahabad
10. Harvey D	Explanation in Geography, Edward Arnold, London
11. Finch and Trewartha	Element of Geography- Physical and Human Methuen, London
12. Salter, C.L.	The Cultural Landscape, California

Population Geography **PGGE_ 104**

Paper-4

Course Outcome

Paper code	Paper name	Course outcome
PGGC _104	**Population Geography**	CO1- Students will find the knowledge about nature, scope and definition of population geography. CO2- Students will be able to discuss various components and issues concern with population. CO3- They will be able to illustrate the reason and results of highly populated and less populated region of the world. CO4- They will be able to distingue between the region of

		highly populated and low density. CO5-. They will be able to evaluate the economy progress and leaving standard in highly populated and low density region of world. CO6- They will be able to prepare a map and write about the population resources regions, population pressure and population explosion, problem of declining and zero growth.

Unit I : Population Geography: Concept and Scope: Components of population growth, demographic characterisation; Migration-types, causes and consequences.

Unit II : Stationary and Stable population, composition and characteristics of rural and urban population; social and occupational structure of population.

Unit III : Population characteristics of developed and developing countries; India's population- characteristics and regional variation; population planning, policies and development.

Unit IV : Theories of population growth; Optimum population; Population projection; population pressure and population explosion; problem of declining and zero growth; population resources regions.

Readings Recommended

1. Bose, Ashish — Population in India's Development, Vikas, New Delhi
2. Chandna R.C. — Geography of Population; Kalyani Pub. New Delhi
3. Champion, T. — Population Matters, Paul Champion, London
4. Johnes, S.R. — Population Geography, Paul Champion, London
5. Pathak, L.P. — Population Studies, Rawat Pub., Jaipur
6. Trewarth G.T. — A Geography of population- World Patterns, John Willy, New York
7. Zelinsky, Wilber — Geography and a Crowding World, Oxford University Press, New York
8. Woods, R. — Population Analysis in Geography; Longman, London

Settlement Geography **PGGC _105**

Paper-5

Course Outcome

Paper code	Paper name	Course outcome
PGGC _105	**Settlement Geography**	CO1- Students will find the knowledge about nature, scope and definition of settlement geography. CO2- Students will be able to discuss various components and issues concern with rural and urban settlement. CO3- They will be able to illustrate the reason and results of highly dense populated urban areas of the world. CO4- They will be able to distingue between the rural and urban region in all continents. CO5-. They will be able to evaluate the economy progress and leaving standard in highly populated and low density region of world. CO6- They will be able to write on town planning, planned cities of India; Urban Problems as environmental, housing, transportation, crime, urban poverty, national capital regions and million cities of India.

Unit I : Nature, Scope, Definition and significance of settlement geography; Human Settlement as a system; concept and characteristics of rural settlements; Theories and models of settlement diffusion; sitting, location, distribution, spacing and nature of dispersion of rural settlement.

Unit II : Types and patterns of settlements; Rural service centres-hierarchy, service area and interaction; Anatomy and characteristics of Indian Villages.

Unit III : Meaning and scope of Urban Geography; Process and trends of Urbanization; Origin and evolution of Urban Centres; Methodology in Urban Studies; functional classification of towns.

Unit IV : Town Planning; Planned cities of India; Urban Problems- environmental, housing, transportation, crime, urban poverty; national capital regions; Million Cities of India.

Readings Recommended

1. Sing, O.P. Nagriya Bhoogol (Hindi), Tara Publication, Varanasi
2. Singh R.L. Rural Settlement in Monsoon Asia, NASI , Varanasi
3. Tiwari, R.C. Settlement Geography (Hindi) Prayag Pub. Allahabad
4. Hudson, F.S. A Geography of Settlements; MC Donald and Evans, New York
5. Daniel.P. Geography of Settlements; Rawat, Jaipur
6. Singh, S.B. Rural Settlement Geography, UBBP Pub. Gorakhpur
7. Mandal R.B. Urban Geography, Concept, New Delhi
8. Mandal, R.B. Introduction to Rural settlement, Concept, New Delhi
9. Mayor and Cohn Readings in Urban Geography, Union of Chicago Press, Chicago
10. Johnson, J.H. Urban Geography, Pagan, Oxford
11. Paddison R. Handbook of Urban Studies, Sage, London

Regional Planning **PGGC _ 106**

Paper-6

Course Outcome

Paper code	Paper name	Course outcome
PGGC _106	**Regional Planning**	CO1- Students will be recall the concept, nature and scope of region. CO2- Students will be able to compare between different types of planning region in India. CO3- They will be able to classify different region on the basis of different natural and cultural components. CO4-. They will justify the limitation of a particular region. CO5- They will be able to evaluate the regional disparities in India. CO6-.They will be able to prepare a plan for the development of

		region on state, district and block level.

Unit I : Concept, Nature and Scope of Regional Planning: Approaches to regional planning; Planning Regions – Concept and Types

Unit II : Regional Planning and National Development; Economic Development and Regional development; Regional disparity and diversity; Regional economic complexes; inter-regional and intra-regional functional interactions.

Unit III : Approaches to Integrated Regional Planning in Different levels – Local, regional and national; planning for tribal, agricultural, industrial and urban regions.

Unit IV : Planning regions of India; Regional policies in India; Regional disparities in India; Multi level planning in India, State, district and block level planning.

Readings Suggested:

1. Mishra, O.P. . Regional Development and Planning in India, Vikas Publication, New Delhi
2. Mishra, R.P. Regional Planning-Concept, Techniques and Policies, Concept Publications, New Delhi
3. Chandna, R.C. Regional Planning: A Comprehensive Text; Kalyani Pub. New Delhi
4. Isard, W, Methods of Regional Analysis; MIT Press, Cambridge
5. Moseley, M.J. Growth centers and spatial planning, Pergmon Press, of Oxford
6. Peter, Hagett Locational Analysis in Human Geography, Edward Arnold, London
7. Fried Mann, J and A. William Regional Development and Planning, MIT Press, Masschusaies (USA)
8. Johnson, J.H. Urban Geography, Pegamn, Oxford
9. Paddison R. Handbook of Urban Studies, Sage, London

Course: Rural Landuse and Agricultural Geography PGGE_107

Paper-7

Course Outcome

Paper code	Paper name	Course outcome
PGGE _107	**Rural Landuse and Agricultural Geography**	CO1- Students will find the knowledge about definition, scope, concept and significance of agriculture geography. CO2- Students will be able to identify world agriculture region. CO3- They will be able to examine the problems and limitation of different types of agriculture. CO4- They will be able to ask question regarding poor progress of agriculture in a particular region in India. CO5-. They will be able to evaluate the progress green revolution and landuse pattern in India. CO6- They will be able to prepare an assignment on programs and policies introduced by India government in the field of agriculture and landuse pattern in India.

UNIT I: Agricultural Geography deliration concept and scope, Economic activities primary, secondary and tertiary, evolution and development of agriculture in the world.

UNIT II: Landuse component of Landuse Techniques of landuse analysis and landuse mappings landuse studies in India and U.K.

UNIT III: Theory of Agriculture localization; Agricultures regionalization; Crop-relation, agricultural efficiency; agricultural productivity; types of agriculture, corp.-combination.

UNIT IV: Problems of Indian agriculture and rural laud use agricultural regions and crop-combination regions of India, Agricultural policies and development (in case of India), Water Land development programmes and policies in India.

Readings Recommended :

1. Tarrant, J.R. : Agricultural Geog. New York
2. Hussain, M. : Agricultural Geography, I. India Publication, Delhi

3. HIbery, B.W. : Agricultural Geography, Oxford University Press.
4. Singh B.B. : Krishi Bhoogol, Gorakhapur.
5. Tiwari, R.C. & Singh B.N. : Krishi Bhoogol Prayay Pub. Bh. Allahabad
6. Gregory, H.F. : Geography of Agriculture Themes in Research.
7. Stamp, L.D. : Land of Britain its use and misuse.
8. Buck, J. : Land Utilization in China
9. Addison, H. : Land dater and Floods.
10. Jacks : Land classification of Landuse Planning
11. Singh, V.R. : Land use Pattern in Mizorom and Environs.
12. Safi, M. : Land Utilization in Eastern U.P.

Biogeography

PGGE _108

Paper-8

Course Outcome

Paper code	Paper name	Course outcome
PGGE _108	Biogeography	CO1- Students will find nature, scope and approaches of biogeography. CO2- Students will be able to recognize biological resource region of the world. CO3- They will be able to interpret the concept of biodiversity. CO4- They will be able to distinguish between biogeography of Uttarakhand Himalaya and Ganga plain region. CO5-. They will be able to evaluate the importance of conservation of wild life and forest. CO6- They will be able to design a plan for the conservation of forest life on local level.

Note : The paper consists of four units.4 long,5 short & 10 very short questions will be set from all unit. The candidates will be required to attempt all section.

UNIT – I

Biogeography : Nature, Scope, Significance, Approaches, History, Recent Development, Succession and Ecological adaptation, Climax concept and ecosystem balance.

UNIT – II

Historical Evolution of Plants and Animals: Pattern and Causes of Plant and Animal Distribution, Factors influencing the distribution of life, Bio – Geographical regions and realm of the world: Biome and Biomass.

UNIT – III

Biodiversity and the source of noverlty in life, Biodiversity: Conept and Significance, Biordiversity and Global Climate Change, Palaeo- Botanical and Palaeo- Climatdogical records of Environmental change of India, Adaptations of Plants and Animals to the Environment, Biogeography of Uttarakhand Himalaya

UNIT – IV

Bio- Geographical information/ Data, Collection retrieval and application, Conservation of Wildlife and forest, Agro forestry and Reforestry international and National efforts for conserving Biological Resources, Biosphere Reserves.

Books Recommended:

1. Bradshaw, M.J. :Earth and Living Planet, ELBS, London, 1979
2. Cox, C.B. and Moore, P.D. :Biogeography : An Ecological and Evolutionary Approach, 5th Edition Blackwell, 1993
3. Hoyt, J.B. :Man and the Earth, Prentice Hall, USA, 1992
4. Huggett, R.J. :Fundamentals of Biogeography, Rutledge, USA, 1998
5. Bansereau, B.M. :Biogeography – An Ecological Perspective, Ronald Press, New York, 1957
6. Joy, T. :Biogeography : A study of Plants in the Ecosphere, Oliver & Boyd, Edinburgh, 1977
7. Mani, M.S. (ed) :Biogeography of India, The Hague, 1975
8. Martin, C. :Plant Geography, Methuen, London, 1975
9. Mathur, H.S. :Essentials of Biogeography, Any Printers, Jaipur, 1998

Paper-9

PGGE_109	Cultural Geography

Course Outcome

Paper code	Paper name	Course outcome
PGGE_109	Cultural Geography	CO1- Students will recall the knowledge of culture. CO2- Students will be able to recognize major cultural

		region of the world. CO3- They will be able to interpret the theories given by geographers. CO4- They will be able to distinguish between the people of different races. CO5-. They will be able to evaluate concept and significations of Culture Geography. CO6- They will be able to develop a plan to maintain unity and brotherhood among the people in the world.

Course Contents

UNIT – I

Concept of Culture and Culture as an indicator of Regional identity. The Study of culture in Geography, Nature, Scope concept and significations of Culture Geography, Development of Cultural Geography, Cultural Landscape, Cultural Process, Cultural Diffusion.

UNIT – II

Origin and dispersal of man, Brief cultural history of Man

Migration processes and cultural development – Prehistoric, Primitive agrarian, Industrial revolution, Role of Technological changes in Cultural Development, Cultural Hearths, Cultural Ecology

UNIT – III

Human Races – origin and dispersal and related theories, type and distribution, Major ethnic, Racial Groups and Linguistic groups.

Resource and Culture – Resource extraction and conversion

Processes and elements of Cultural Transformation

Cultural Segregation and Assimilation, Cultural unity and Diversification

UNIT- IV

Cultural Realms – Monsoon Asian, Meso – African, Mediterranean, Western European, Anglo – American, Latin American

Cultural Regions - Indo – Aryan, Dravidian, Chinese, Arabian Islamic, Angolo – American Atlent Coastal, Brazilian, Maxican, English – European

Books Recommended:

Text Books:

1. Spencer, J.&E. ThomsasW.I. : Introducing cultural Geography

2. Rostlund, F. : Outline of Cultural Geography

3. Wagner, P.J. & Mikesell, M.W. (eds) : Reading Cultural Geography

4. Sultar, C.I. : The Cultural Landscape

5. Frazier, D.E. : Race and Cultural Contacts in the modern world

6. Spher, D.F. : Geography of Religions

7. Carter, G.F. : Man and the land a cultural Geography

8. Dohra, F.E. & Sommers, L.M. (eds) : Cultural Geography Selected Readings

9. https://www.amazon.in/Introduction-Human-Geography-5th-edn-ebook/dp/B01FDYGTTS

10. https://www.amazon.in/INTRODUCTION-HUMAN-GEOGRAPHY-Jyotiram-Chandrakant-ebook/dp/B08B1QYG4X

Reference Books:

1. Cultural Geography, P. K. Pande K. Chavan, Crescent Publishing House, New Delhi.
2. Human Geography, Majid Husain, Rawat Publication, New Delhi.