

NATIONAL EDUCATION POLICY-2020

Cooch Behar Panchanan Barma University

Department of Geography

Structure & Detailed Syllabus

Four years Undergraduate Programme (Bachelor) with
Multiple Exit Options in

IN

GEOGRAPHY

Effective from 2023 – 2024

A) Syllabus & Structure Four years Undergraduate Programme (Bachelor) with Multiple Exit Options in GEOGRAPHY

CBPBU_NCCF_Course Structure_2023-24

1 st Year				2 nd year				3rd Year				4 th Year				4 th Year with Research			
Certificate				Certificate				UG Degree				UG Degree (Honours)				UG Degree (Honours) with Research			
1ST SEM	C	2ND SEM	C	3RD SEM	C	4TH SEM	C	5TH SEM	C	6TH SEM	C	7TH SEM	C	8TH SEM	C	7TH SEM	C	8TH SEM	C
Major-1	6	Major-2	6	Major-3	6	Major-5	6	Major-7	6	Major-10	6	Major-13	6	Major-17	6	Major -13	6	Major-16	6
Minor-1	6	Minor-2	6	Major-4	6	Major-6	6	Major-8	6	Major-11	6	Major-14	6	Major-18	6	Major-14	6	Major-17	6
MDC-1	3	VAC-1	3	Minor-3	6	Minor-4	6	Major-9	6	Major-12	6	Major-15	6	Major-19	6	Major-15	6		
SEC-I	3	SEC-2	3	SEC-3	3	AEC-2	4	MDC-3	3	VAC-2	3	Minor-5	6	Minor-6	6	Minor-5	6	Minor-6	6
AEC-1	4	INTRN	4	MDC-2	3							Major-16	6			Research-1		Research-2	12
	22		22		24		22		21		21		30		24		24		30
44				46				42				54				54			
132 (3 Year)																			
186 (4 Year)																			
186 (4 Years with Research)																			

Undergraduate (Bachelor) Programme in Geography Course Type (All) (Value in parenthesis indicates Credits) CBPBU							
Semester	Discipline Specific Core (DSC) Major (6)	Open Elective (OE) Minor (6)	Multi-disciplinary Courses (MDC-I) (3)	Skill Enhancement Course (SEC-I) (3)	Ability Enhancement Course (AEC-I) (3)	Value Added Course (VAC-I) (3)	Internship (04)
I	Physical Geography (Theory), Basic Cartographic Techniques and Map Reading (Practical)	Yes	Yes	Yes	Yes	Nil	Nil
II	Fundamentals of Human Geography (Theory), Elementary Instrumental Observation and Map Reading (Practical)	Yes	Nil	Yes	Nil	Yes	Yes

A. Curriculum Structure for Undergraduate (Bachelor) Programme in Geography

Name of the Degree Programme: Undergraduate (Bachelor) Programme	Total Credits for the Programme: 186
Discipline/Subject: Geography	Starting year of implementation: 2023-2024

a) Programme Articulation Matrix for Core Courses: CBPBU

List of all Papers in Semester-wise Titles of the Papers in Under Graduate												
Certificate Course with Geography as Major												
Year	Sem.	Course Code	Paper Title	Theory/ Practical	Credits	Level	Instruction Hour/ Semester	Distribution of Marks in Evaluation				Duration of Exam
								End Semester Examination	Internal/ External	Attendance	Total	End Semester Examination
FIRST-YEAR	I	GEOG101T	Physical Geography	Theory	4	100	60	50	10	5	100	2 Hours
		GEOG101P	Basic Cartographic Techniques and Map Reading	Practical	2		60	25	10			2 Hours
	II	GEOG201T	Human Geography	Theory	4	100	60	50	10	5	100	2 Hours
		GEOG201P	Surveying Techniques	Practical	2		60	25	10			2 Hours

MAJOR-I			
Programme: MAJOR-I		Year: I	Semester: I Paper-IA
Course Code:	Course Title: Physical Geography (Theory)		
Credits: 04	No of Lectures= 60 Hours		Duration of Exam: 2 Hours
Full Marks: 65 (End Semester Exam+ Internal Assessment + Attendance)			
Total No. of Lectures-Tutorials-Practical (in hours per week): 4-0-0			
Course Objectives:			
1. To define the concepts of Physical Geography and geo-tectonics 2. To introduce the fundamental concept of geomorphology and the evolution of landforms 3. To understand the dynamic nature of the weather and climate.			
Unit	Topic (Value in parenthesis indicates Marks)		No. of Lectures
Unit I Concept of Physical Geography	1.1. Definition, Nature, and Scope of Physical Geography and its relationship with other disciplines. 1.2. Origin of continents and ocean basins: Convectional Current theory, Plate Tectonics, Isostasy, Sea Floor Spreading 1.3. Geological Time Scale and Evolution of Landforms and Lives in Different Geological Periods (15 Marks)		20
Unit II Geomorphology	2.1. Fundamental Concepts in Geomorphology 2.2. Drainage development and evolution of landforms in Horizontal, Uniclinal, Folded, Faulted and Domal Structure. 2.3. Morphogenetic Region under different climatic regimes. (15 marks)		20
Unit III Climatology	3.1. Insolation, Vertical, and Horizontal Distribution of temperature, Pressure and pressure belts, 3.2. Winds and Wind Circulation: Tri-cellular Model, Jet Stream, ENSO: El Nino, La Nina and Walker Circulation 3.3. Precipitation: Formation and types, Theories of the Origin of Monsoon and Features, Climate Change: Concept, Evidences, Causes and Consequences. (20 Marks)		20

Suggested Reading:

1. Barry, R.G. and Chorley, R.J. (1998). Atmosphere, Weather and Climate. Routledge, London.
2. Bryant, H. Richard (2001). Physical Geography Made Simple. Rupa and Co., New Delhi.
3. Bunnett, R.B. (2003). Physical Geography in Diagrams, Fourth GCSE edition, Pearson Education (Singapore) Pvt Ltd.
4. Garrison T (1998). Oceanography. Wordsworth Cp, Bedmont.
5. Lake, P. (1979). Physical Geography (English & Hindi Edition) Cambridge Univ. Press, Cambridge.
6. Monkhouse, F I (1979). Physical Geography, Methuen, London.
7. Singh, S. (2003). Physical Geography (English and Hindi Editions) Prayag Pustak Bhawan, Allahabad.
8. Strahler, A.N. and Strahler A.M. (1992). Modern Physical Geography, John Wiley and Sons, New York
9. Thornbury, W. D. (1954). Principles of Geomorphology. New York: John Wiley.
10. Wooldridge, S.W. and Morgan, R.S. (1959). The Physical Basis of Geography: An Outline of Geomorphology, Longman, London.

MAJOR-I		
Programme: MAJOR-I		Year: I
Subject: Geography		
Course Code:	Course Title: Basic Cartographic Techniques and Map Readings (Practical)	
Credits: 2	No of Lectures= 60 Hours	Duration of Exam: 2 hours
Full Marks: 25+10 [(End Semester Exam + Lab Note book (5) + Viva-Voce (5))]		
Total No. of Lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-4		
Course Objectives: <ol style="list-style-type: none"> 1. To learn the basics of Cartography and Mapmaking. 2. To understand and interpret SOI topo sheets. 3. To draw maps with the help of SOI topo sheets. 		
Unit	Topic (Value in parenthesis indicates Marks)	No. of Lectures
Unit I Scale	Scale: Meaning, importance, and types, Conversion of Scale, Graphical Construction: Comparative, Diagonal Scale and Vernier Scale (10 Marks)	20
Unit II Analysis and interpretation of S.O.I. Maps	Analysis and interpretation of S.O.I. Maps of the Plateau area under the following heads: <ol style="list-style-type: none"> i. Indian topographical map system: Their classification and types ii. Broad Physiographic Divisions based on break-of-slopes along with Representative Profile iii. Serial Profiles; Superimposed, Projected, and Composite Profiles iv. Identification of Drainage Patterns and Drainage Characteristics. v. Morphometric Techniques: Relative Relief (after Smith), Average Slope (after Wentworth), Drainage Density (Horton), Dissection Index (Dov Nir), Ruggedness Index vi. Identification of Settlement Patterns and Settlement Frequency vii. Transect Chart showing the relationship between the Physical and Cultural Features (15 Marks) Note: An area of (10 cm.x10 cm) will be selected from the topographical sheet for the Morphometric analysis.	40

Suggested Reading:

1. Monkhouse, F.J. & Wilkinson, F.J. (1985). Maps and Diagrams. Methuen, London.
2. Raisz, E (1962). General Cartography. John Wiley & Sons, New York.
3. Robinson, Arthur H. et al. (2010): *Elements of Cartography*, 6th edition, Wiley India, New Delhi.
4. Saha, Pijush Kanti and Basu, Partha (2014): *Advanced Practical Geography*, Books and Allied (P) Ltd., Kolkata.
5. Sarkar, Ashis (2015): *Practical Geography – A Systematic Approach*, Orient Black Swan, New Delhi.
6. Singh, L. R. (2006). Fundamentals of Practical Geography. Sharda Pustak Bhawan, Allahabad.
7. Singh, R. L. & Singh, Rana PB (1993). Elements of Practical Geography, Kalyani Publishers, New Delhi

MAJOR-II			
Programme: Major-II		Year: I	Semester: II Paper-2A
Subject: Geography			
Course Code:	Course Title: Fundamentals of Human Geography (Theory)		
Credits: 04	No of Lectures= 60 Hours		Duration of Exam: 2 Hours
Full Marks: 65 (End Semester Exam+ Internal Assessment + Attendance)			
Total No. of Lectures-Tutorials-Practical (in hours per week): 4-0-0			
Course Objectives:			
<ol style="list-style-type: none"> 1. To learn Meaning, Concept, Nature, Scope and development of Human Geography. 2. To understand Cultural Changes in and around the world. 3. To learn about the different races, religions, tribes, their culture and cultural development. 			
Unit	Topic (Value in parenthesis indicates Marks)		No. of Lectures
Unit I: Introduction to Human Geography	1.1. Definition, Nature, and Scope of Human Geography and its relationship with other disciplines, Approaches to Human Geography with special reference to Man-Environment relationship, and Humanistic Approach 1.2. Human Adaptations in different climatic regions: Pygmy, Masai, Bedouin, Kirghiz, Eskimo. (20 Marks)		20
Unit II: Social Geography	2.1. Social Processes, Social Space, Social Groups, Social Distance, Social Well-being, Social Area Analysis (Shevky and Bell) 2.2. Concept of Race; Classification of major races of the World with special reference to India (Risley and B.S. Guha), Major Linguistic groups of the World. (15 Marks)		20
Unit-III: Cultural Geography	3.1. Concept of Culture, Cultural Traits, Cultural Hearths, Cultural Realm and Cultural Diffusion 3.2. Concept of Ethnicity and Tribe, Distribution and Characteristics of Major Tribes of Oraon, Gond, Santhal, Jarawa, Khasi. (15 Marks)		20

Suggested Reading:

1. De Blij, H.J. Human Geography: Culture, Society and Space. John Wiley, New York.
2. Haggett, P. (2004). Geography: A Modern Synthesis. Harper & Row, New York
3. Husain, Majid (2021): *Human Geography*, Rawat Publications, New Delhi.
4. Hussain, M. (1994): Human Geography. Rawat Publication, Jaipur.
5. Kaushik, S.D.& Sharma, A.K. (1996): Principles of Human Geography, Rastogi Pub. Meerut.
6. Maurya, S.D. (2016): *Cultural Geography*, Sardha Pustak Bhawan, Allahabad.
7. Maurya, S.D. (2018): *Human Geography*, Pravalika Publications, Allahabad.
8. Norton W. (1995). Human Geography. Oxford University Press, New York.
9. Patra, Punyatoya, et al. (2020): *Perspectives in Human Geography*, Concept Publishing Company, Ltd., New Delhi.
10. Rubenstein, James M. (2012): *Contemporary Human Geography*, Prentice Hall of India, New Delhi.
11. Saxena, H.M. (2018): *Economic Geography*, 2nd Edition, Rawat Publications, New Delhi.
12. Singh, L...R. (2018): *Fundamentals of Human Geography*, Sharda Pustak Bhawan, Allahabad.

MAJOR-II		
Programme: MAJOR-II		Year: I
Subject: Geography (Practical)		
Course Code:	Course Title: Elementary Instrumental Observation and Map Reading	
Credits: 2	No of Classes= 60 Hours	Core Compulsory
Max. Marks: 25+10 [(End Semester Exam + Lab Notebook (5) + Viva-Voce (5))]		
Total No. of Lectures-Tutorials-Practical (in hours per week): 0-0-4		
Course Objectives: <ol style="list-style-type: none"> 1. To learn function and use of meteorological instruments 2. To learn function and use of Geomorphological instruments 3. To know the representation of climatic data 		
Unit	Topic (Value in parenthesis indicates Marks)	No. of Lectures
Unit I: Meteorological instruments	Reading of the Meteorological instruments: Barometer, Thermometer (Minimum and Maximum; Dry and Wet bulb), Rain gauge, and Anemometer (05)	20
Unit II: Geomorphological instruments	Measurement of height and depth by Clinometer, Measurement of the Dip and Strike of the bedding plane by Brunton Compass, Measurement of slope by Abney's Level, Measurement of river flow by Water Current Meter, Unit Hydrograph, Rotameter (10)	20
Unit III: Representation of climatic data	Representation of climatic data: Composite Climograph, Climograph (G. Taylor), and Hythergraph (G. Taylor) (10)	20

Suggested Reading:

1. Monkhouse, F.J. & Wilkinson, F.J. (1985). Maps and Diagrams. Methuen, London.
2. Raisz, E (1962). General Cartography. John Wiley & Sons, New York.
3. Saha, Pijushkanti and Basu, Partha (2014): Advanced Practical Geography, Books and Allied (P) Ltd., Kolkata.
4. Sarkar, Ashis (2015): Practical Geography – A Systematic Approach, Orient Black Swan, New Delhi.
5. Sharma, J.P. (2001). Prayogik Bhoogol. Rastogi Pub, Meerut.
6. Singh R.L. and Singh Rana P.B. (2012): Elements of Practical Geography, Kalyani Publishers, Ludhiana.
7. Singh, L. R. (2006). Fundamentals of Practical Geography. Sharda Pustak Bhawan, Allahabad.
8. Singh, R. L. & Singh, Rana PB (1993). Elements of Practical Geography (Hindi & English Editions), Kalyani Publishers, New Delhi.

MDC-I			
Programme: MDC-I		Year: I	Semester: I Paper-IA
Subject: Geography			
Course Code:	Course Title: Fundamentals of Physical Geography (Theory)		
Credits: 02+01=3	No of Lectures= 30 Hours+10 Hours		Duration of Exam: 2:00 Hours
Full Marks: 50 (End Semester Exam+ Internal Assessment + Attendance)			
Total No. of Lectures-Tutorials-Project (in hours per week): 2-0-1			
Course Objectives: <ol style="list-style-type: none"> To introduce the fundamental concept of geomorphology and the evolution of landforms To know the concept of hydrology and hydrological cycle and ground water dynamics To understand the bio geography and ecosystem. To make an understanding about local landforms. 			
Unit	Topic (Value in parenthesis indicates Marks)		No. of Lectures
Unit I Geomorphology	1.1. Internal structure of the earth; Rocks: Characteristics and types 1.2. Earthquake: Types, Causes and Effects, Major Seismic Zones and Tsunamis. 1.3. Types of various landforms: Plain, Plateau, and Mountain 1.5. Exogenetic agents and resultant landforms: Fluvial, Arid, Glacier, Wave (10)		10
Unit II Hydrology	2.1. Concept of hydrology: Surface Runoff, Porosity and permeability, Infiltration, Evaporation, Evapotranspiration, 2.2. Global hydrological cycle, 2.3. Ground Water Movement and Storage (10 Marks)		10
Unit III Biogeography	3.1. Biosphere: Concept and Components 3.2. Ecosystem: Concept, Types and Components 3.3. Concept of Trophic Level, Food Chain and Food Web, Energy flow in Ecosystem, Biodiversity (15)		10
Unit IV Project	Case Study: Visit to local area and study landforms and preparation of a project report based on the observation. Not more than 10 pages (Introduction, objectives, Brief description and findings) (This is an Internal Assessment Part) (10 Marks)		10

Suggested Reading:

- Bryant, H. Richard (2001). Physical Geography Made Simple. Rupa and Co., New Delhi.
- Lake, P. (1979). Physical Geography (English & Hindi Edition) Cambridge Univ. Press, Cambridge.
- Monkhouse, F I (1979). Physical Geography, Methuen, London.
- Singh, S. (2003). Physical Geography (English and Hindi Editions) Prayag Pustak Bhawan, Allahabad.
- Strahler, A.N. and Strahler A.M. (1992). Modern Physical Geography, John Wiley and Sons, New York
- Thornbury, W. D. (1954). Principles of Geomorphology. John Wiley, New York
- Wooldridge, S.W. and Morgan, R.S. (1959). The Physical Basis of Geography: An Outline of Geomorphology, Longman, London.

Minor-1			
Programme: Minor-1		Year: II	Semester: III Paper-IA
Course Code:	Course Title: Physical Geography (Theory)		
Credits: 04	No of Lectures= 60 Hours	CBPBU	Duration of Exam: 3 Hours
Full Marks: 65 (End Semester Exam+ Internal Assessment (theory) + Lab Note Book & Viva Voce+ Attendance)			
Total No. of Lectures-Tutorials-Practical (in hours per week): 4-0-0			
Course Objectives:			
<ol style="list-style-type: none"> 1. To define the concepts of Physical Geography and geo-tectonics 2. To introduce the fundamental concept of geomorphology and the evolution of landforms 3. To understand the dynamic nature of the hydrosphere. 4. To understand the dynamic nature of the weather and climate. 			
Unit	Topic (Value in parenthesis indicates Marks)		No. of Lectures
Unit I Geomorphology	1.1. Internal structure of the earth; Rocks: Characteristics, types, and rock cycle, 1.2. Weathering: meaning, types and controlling factors. 1.3. Agents of Denudation: Processes of Fluvial, Groundwater, Sea Wave, Wind and Glaciers and resultant landforms. (20 Marks)		20
Unit II Hydrosphere	2.1. Ocean bottom Relief features of the Indian, Atlantic and Pacific Ocean 2.2. Ocean Deposits: Types and Characteristics 2.3. Ocean Currents and Tide (15 Marks)		20
Unit III Climatology	3.1. Elements of Weather and Climate; 3.2. Composition and structure of the atmosphere, Insolation, Pressure and pressure belts, 3.3. Winds: Planetary, Periodic, and Local (15 Marks)		20

Suggested Reading:

1. Bryant, H. Richard (2001). Physical Geography Made Simple. Rupa and Co., New Delhi.
2. Bunnett, R.B. (2003). Physical Geography in Diagrams, Fourth GCSE edition, Pearson Education (Singapore) Pvt Ltd.
3. Lake, P. (1979). Physical Geography (English & Hindi Edition) Cambridge Univ. Press, Cambridge.
4. Monkhouse, F I (1979). Physical Geography, Methuen, London.
5. Singh, S. (2003). Physical Geography (English and Hindi Editions) Prayag Pustak Bhawan, Allahabad.
6. Strahler, A.N. and Strahler A.M. (1992). Modern Physical Geography, John Wiley and Sons, New York
7. Thornbury, W. D. (1954). Principles of Geomorphology. John Wiley, New York
8. Wooldridge, S.W. and Morgan, R.S. (1959). The Physical Basis of Geography: An Outline of Geomorphology, Longman, London.

Minor-I			
Programme: Minor-1		Year: II	Semester: III Paper-IB
Course Code:	Course Title: Scale and Map Projection (Practical)		
Credits: 02	No of Lectures= 60 Hours	CBPBU	Duration of Exam: 2 Hours
Full Marks: 35 (End Semester Exam + Lab Note Book & Viva Voce)			
Total No. of Lectures-Tutorials-Practical (in hours per week): 0-0-4			
Course Objectives:			
1. To learn function and use of Map scale 2. To learn function and use of Map projection			
Unit	Topic (Value in parenthesis indicates Marks)		No. of Lectures
Unit I: Scale	1.1. Concept of Scale and Scale Conversion, Graphical Construction of Linear Scale (10)		30
Unit II Map Projection	2.1. Concept of Map Projection: Polar Zenithal Gnomonic Projection, Simple Conical projection with One Standard Parallel, and Cylindrical Equal Area Projection (Graphical Construction) (15)		30

Suggested Reading:

1. Monkhouse, F.J. & Wilkinson, F.J. (1985). Maps and Diagrams. Methuen, London.
2. Raisz, E (1962). General Cartography. John Wiley & Sons, New York.
3. Sarkar, Ashis (2015): Practical Geography –A Systematic Approach, Orient Black Swan, New Delhi.
4. Sharma, J.P. (2001). Prayogik Bhoogol. Rastogi Pub, Meerut.
5. Singh, R. L. & Singh, Rana PB (1993). Elements of Practical Geography (Hindi & English Editions), Kalyani Publishers, New Delhi.
6. Singh, L. R. (2006). Fundamentals of Practical Geography. Sharda Pustak Bhawan, Allahabad.

Minor-II			
Programme: Minor-II		Year: II	Semester: IV Paper-2A
Subject: Geography			
Course Code:	Course Title: Fundamentals Human Geography (Theory)		
Credits: 04	No of Lectures= 60 Hours	CBPBU	Duration of Exam: 3 Hours
Full Marks: 65 (End Semester Exam+ Internal Assessment + Attendance)			
Total No. of Lectures-Tutorials-Project (in hours per week): 4-0-0			
Course Objectives: <ol style="list-style-type: none"> To learn Meaning, Concept, Nature, Scope and development of Human Geography. To understand Culture and society of the World and India To learn about the Nature of Population and Human Settlements. 			
Unit	Topic (Value in parenthesis indicates Marks)		No. of Lectures
Unit I: Introduction to Human Geography	1.1. Definition and Major Elements in Human Geography, 1.2. Economic Activities: Concept and classification, different sectors of the economy, 1.3. Human Development Index (10 Marks)		20
Unit II: Cultural and Social Geography	2.1. Concept of Culture, Cultural Hearths 2.2. Race: Definition, Classification of major races of the World and India, 2.3. Concept of Society and Community, Social Group (20 Marks)		20
Unit III: Human Population and Settlements	3.1. Distribution and Growth of Population, Density of Population: meaning and Types, Regional distribution of Density of Population in India, 3.2. Population Movement: Definition of Migration and related terminologies, Types, Causes and consequences of migration. 3.3. Human Settlements: Origin, types and patterns of Human Settlements, Characteristics of Rural and Urban Settlements, Functional Classification of Urban Settlements after Ashok Mitra (20 Marks)		20

Suggested Reading:

- De Blij, H.J. Human Geography: Culture, Society and Space. John Wiley, New York.
- Haggett, P. (2004). Geography: A Modern Synthesis. Harper & Row, New York
- Husain, Majid (2021): *Human Geography*, Rawat Publications, New Delhi.
- Hussain, M. (1994): Human Geography. Rawat Publication, Jaipur.
- Kaushik, S.D.& Sharma, A.K. (1996): Principles of Human Geography, Rastogi Pub. Meerut.
- Maurya, S.D. (2016): *Cultural Geography*, Sardha Pustak Bhawan, Allahabad.
- Maurya, S.D. (2018): *Human Geography*, Pravalika Publications, Allahabad.
- Patra, Punyatoya, et al. (2020): *Perspectives in Human Geography*, Concept Publishing Company, Ltd., New Delhi.
- Singh, L.R. (2005). Fundamentals of Human Geography, Sharda Pustak Bhawan, Allahabad.

Minor-II			
Programme: Minor-II		Year: II	Semester: IV Paper-2B
Subject: Geography			
Course Code:	Course Title: Basic Statistics and Basic Cartogram (Practical)		
Credits: 02	No of Lectures= 60 Hours	CBPBU	Duration of Exam: 3 Hours
Full Marks: 35 (End Semester Exam+ Project Internal Assessment + Attendance)			
Total No. of Lectures-Tutorials-Practical (in hours per week): 0-0-4			
Course Objectives:			
1. To learn Basic Statistics and its application in Geographical data 2. To learn Basic cartogram and its application in Geographical data			
Unit	Topic (Value in parenthesis indicates Marks)		No. of Lectures
Unit I: Basic Statistics	1. Basic Statistics: Data, Tabulation, Frequency distribution and graphical representation, Measures of Central Tendency (10 Marks)		30
Unit II: Basic Cartogram	2. Basic Cartogram: Simple Bar diagram, Pie-diagram, Proportional circle, Age Sex-Pyramid (15 Marks)		30

Suggested Reading:

1. Das, N.G. (2017): Statistical Methods (Combined edition volume 1 & 2), McGraw Hill Education, Noida, Uttar Pradesh
2. Monkhouse, F.J. & Wilkinson, F.J. (1985). Maps and Diagrams. Methuen, London.
3. Raisz, E (1962). General Cartography. John Wiley & Sons, New York.
4. Sarkar, Ashis (2015): Practical Geography – A Systematic Approach, Orient Black Swan, New Delhi.
5. Sharma, J.P. (2001). Prayogik Bhoogol. Rastogi Pub, Meerut.
6. Singh, R. L. & Singh, Rana PB (1993). Elements of Practical Geography (Hindi & English Editions), Kalyani Publishers, New Delhi.
7. Singh, L. R. (2006). Fundamentals of Practical Geography. Sharda Pustak Bhawan, Allahabad.