

Progressive Education Society's
Modern College of Arts, Science and Commerce (Autonomous),
Shivajinagar, Pune 05

F.Y.B.A. Geography NEP 2023 Pattern

Syllabus

To be implemented from Academic Year 2023-24

Semester	Paper	Subject code	Title of Paper	No. of credits
Semester I				
F.Y.B.A. Sem I	Major Paper 1 (Theory)	23ArGeoU1101	Physical Geography	4
	Major Paper 2 (Practical)	23ArGeoU1102	Practicals in Physical Geography	2
	OE	23ArGeoU1401	Geography of Tourism -I	2
	VSC (Major Specific Practical I)	23ArGeoU1501	Lab Course on Weather Instruments-I	2
Semester II				
F.Y.B.A. Sem II	Major Paper 3 (Theory)	23ArGeoU2101	Human Geography	4
	Major Paper 4 (Practical)	23ArGeoU2102	Lab Course on Human Geography	2
	Minor [Minor Paper I (Theory)]	23ArGeoU2301	Environmental Geography	2
	OE	23ArGeoU2401	Geography of Tourism -II	2
	VSC (Major Specific Practical II)	23ArGeoU2501	Lab Course on Weather Instruments-II	2

Progressive Education Society's
Modern College of Arts, Science and Commerce (Autonomous), Shivajinagar, Pune 05
F. Y. B. A. Geography
(2023 Course under NEP 2020)
Course Code: 23ArGeoU1101
Title of the Course: Physical Geography

Credits: 04

Total Lectures: 60

Objectives:

1. To introduce the students to the basic concepts in physical geography.
2. To orient the students to the applications of physical geography.
3. To familiarise the students with different Geo-environmental problems.
4. To sensitize the students with urgent need of protection and conservation of different aspects of Earth and its environment.

	Semester –I	Lectures
Chapter 1	Introduction to Physical Geography	10
	A. Meaning and definitions of Physical Geography B. Nature and Scope of Physical Geography C. Branches of Physical Geography D. Importance of Physical Geography E. Introduction about the Earth system (Lithosphere, Atmosphere, Hydrosphere and Biosphere)	
Chapter 2	Lithosphere	16
	A. Interior of the earth B. Wegner's Continental Drift Theory C. Endogenic and Exogenic forces and processes a) Endogenic – Volcano, Earthquake b) Exogenic – Fault, folds	
Chapter 3	Atmosphere	18
	A. Structure and composition of the atmosphere B. Heat Balance C. Pressure belts and wind system D. Types of clouds, Forms and types of Precipitation	
Chapter 4	Hydrosphere	16
	A. Hydrological cycle B. General structure of ocean floor C. Ocean water circulation: i. Waves ii. Tides iii. Ocean currents	

Learning Outcomes:

1. Students will understand the basic concepts in physical geography.

2. Students will understand the applications of physical geography.
3. Students will familiarise with different Geo-environmental problems.
4. To sensitize with urgent need of protection and conservation of different aspects of Earth and its environment.
5. To understand the different erosional & depositional features and intervention of mankind in the natural environment.
6. To understand various geographical phenomenon, their origin, distribution and effect on life. This study will help the students in general and society in particular to cope up with the natural calamities.
7. Ability development about GPS applications in study of Geography and for other purpose.
8. To gain knowledge about endogenetic forces and related movements, their associated landforms and its consequences.
9. To ascertain the knowledge about earth science.

Reference Books:

1. Bloom A.L., 2003. Geomorphology: A Systematic Analysis of Late Cenozoic Landforms, Prentice- Hall of India, New Delhi.
2. Husain, M., 2001. Fundamentals of Physical Geography, Rawat Publication, Jaipur.
3. Siddhartha, K., 2001. The Earth's Dynamic Surface, Kisalaya Publications Pvt. Ltd, New Delhi.
4. Christopherson, R.W., 2000. Geo-systems, Prentice Hall, INC.USA.
5. Haywood, Sarah Cornelius and Steve Carver, 1998. An Introduction to Geographical Introduction Systems.
6. Hamblin, W.K., 1989. The Earth's Dynamic Systems, Macmillan Publishing Company, New York.
7. Strahler A.A. and Strahler A.N., 2002. Physical Geography.
8. Singh, S., 1998. Geomorphology, Prayag Pustak Bhavan, Allahabad.
9. प्रा. दाते आणि सौ. दाते, प्राकृतिक भूगोल
10. डॉ. श्रीकांत कार्लेकर, प्राकृतिक भूगोलाची मुलतत्वे.

**F.Y.B.A. Geography Syllabus
(2023 Course under NEP 2020)**

Course Code: 23ArGeoU1102

Title of the Course: Practicals in Physical Geography

Credits: 02

Total Practicals: 15

Objectives:

1. To Study the basic techniques in Physical and Human Geography.
2. To learn the practical applications of theories in Physical and Human Geography.

Semester - I		Practicals
Chapter 1	Elements of Map	02
	Basic Concepts A. Definition B. Elements of Map: Title, Scale, Direction, Projections, Conventional Signs and Symbols C. Types of Maps D. Uses of Maps	
Chapter 2	Map Scales	07
	A. Definition of Map scale B. Types of Scale: i. Verbal scale, ii. Representative Fraction, iii. Graphical scale C. Conversion of Scale: i. Verbal scale into Representative Fraction ii. Representative Fraction into Verbal scale D. Construction of simple Graphical scale (at least two examples from metric and British system)	
Chapter 3	Methods of Relief Representation	06
	A. Qualitative Methods: Hachures, hill shading, layer tint B. Quantitative Methods: Spot height, triangulation station, bench mark, Contours, form lines, C. Representation of following features by contours: i. Slopes: Steep and gentle slope, uniform slope, concave slope, convex slope, terraced slope, ii. Landforms: conical hill, plateau, ridge, saddle, V-shaped valley, U-shaped valley, gorge, cliff	

Learning Outcomes:

1. To acquire the knowledge of various techniques in Physical Geography.
2. On completion of the course, student will be able to design the techniques of Physical Geography for representation and interpretation of Geographical data and its phenomena.

Reference Books:

1. Wood, A. and Roberts, S. (2011): Economic Geography: Places, Network and Flows, Routledge, London
2. Lutgens, F. K. and Tarbuck, E. J. (2010): The Atmosphere: An Introduction to Meteorology, Pearson Prentice Hall, New Jersey
3. Singh, S. (1998): Geomorphology, Prayag Pustak Bhawan, Allahabad
4. Liendsor, J. M. (1997): Techniques in Human Geography, Routledge, London
5. Chorley, R. J. and Hagget, P. (1972): Socio-economic Models in Geography, Mathuen and Co., London
6. Lloyd P. and Dicken, B. (1972): Location in Space: A Theoretical Approach to Economic Geography, Harper and Row, New York
7. Monkhouse, F. J. and Wilkinson, H. R. (1971): Maps and Diagrams, Methuen and Co., London
8. King, C. A. M. (1966): Techniques in Geomorphology, Edward Arnold Ltd., London
9. Monkhouse, F. J. and Wilkinson, H. R. (1964): Maps and Diagrams: Their Compilation and Construction, Methuen and Co. Ltd., London
10. Strahler, A. N. (1964): Quantitative Geomorphology of Drainage Basins and Channel Networks, In: Handbook of Applied Hydrology, Ven Te Chow, Ed., Section 4-II, McGraw-Hill Book Company, New York
11. Miller, A. A. (1953): The Skin of the Earth, Methuen and Co. Ltd., London

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F. Y. B. A. Geography
(2023 Course under NEP 2020)
Course Code: 23ArGeoU1401
Title of the Course: Geography of Tourism-I

Credits: 02

Total Lectures: 30

Objectives:

- 1) To acquaint the student's basic concepts of Geography & Tourism
- 2) To aware the students with the utility and application of Tourism
- 3) To help the students & society to understand the interrelationship between tourism and employment generation opportunities.
- 4) To understand the impact of tourism on Physical and Human Environments.

	Semester – I	Lectures
Chapter 1	Introduction to Tourism Geography	10
	A. Introduction and Definition i. Introduction ii. Definition of Tourism Geography, Tourists and Tourism B. Nature of Tourism Geography i. Uniqueness ii. Diversity iii. Recreational iv. Dynamic v. Interdisciplinary vi. Non-Productive vii. Seasonal C. Scope of Tourism Geography i. Tourism as a Basic Need of Mankind ii. Tourism and Transportation iii. Natural environment and Tourism iv. Culture and Tourism v. Religion and Tourism D. Importance of Tourism	
Chapter 2	Concepts in Tourism	10
	A. Geo-Tourism B. Agro- Tourism C. Heritage Tourism D. Adventure Tourism E. Religious Tourism F. Health Tourism G. Sport Tourism H. Eco-tourism	

Chapter 3	Classification of Tourism	10
	Classification Based on: A. Nationality: i. International ii. National B. Travel Time: i. Long Haul ii. Short Haul C. Travel Distance: i. Global ii. National iii. Regional iv. Local D. Number of Tourists: i. Groups ii. Family Members iii. Individual E. Purpose: i. Religious ii. Recreation iii. Heritage iv. Adventure v. Nature vi. Health vii. Sports	

Learning Outcomes:

1. Students will understand the natural and manmade resources associated with tourism activity.
2. To understand different types and concepts in tourism.
3. To prepare for their employment opportunities in the field of tourism management planning and own agency.
4. To apply and understand various recent tourist agencies to manage world wide tourist destinations.
5. Appreciate the basic concepts and geographical parameters of tourism.
6. Acquire knowledge on the recent trends and patterns of tourism development in India and other countries.
7. To study the tourism motivating factors for pilgrimages, leisure, recreation, elements.

Reference Books:

1. Robinson H.(1996): A Geography of Tourism
2. Bhatia A.K., Sterling Publisher Ltd., New Delhi: Tourism Development, Principles and Practices
3. S.N. Singh (1985): Geography of Tourism and Recreation
4. Douglas Pearce(1987) Tourism Today : A Geographical Analysis :
5. Mathieson A. and Wall C, Logman, U.K: Tourism : Economic Physical and Social Impact:
6. Manoj Das India: A tourist Paradise
7. Maneet Kumar Tourism Today: An Indian Perspective
8. Hudman L.E. Geography of Travel and Tourism
9. Seth P.N (1985) Sterling Publisher Ltd., New Delhi Successful Tourism Management
10. Smith S.L.J : Tourism Analysis
11. Gupta V.K : Tourism of India
12. Kaul R.N, Sterline Publisher Ltd: Dynamics of Tourism
13. Shinde S.B, Phadke Prakashana Kolhapur 2: Geography of Tourism
14. Nagktode P.M., Prof. D.Pardhi. Vidya Prakashan Nagpur: Geography Tourism
15. Vitthal Gharpure., Pimplapure Publication Nagpur: Geography of Tourism.
16. Bhagwat A.V., MedhaJoshi.: Murlidhar Publication Pune: Geography of Tourism.
17. Dixit N.K, Vista International Publication Delhi: Tourism Geography.
18. Sharma A. (2008): Tourism Development, RBSA Publishers, Jaipur.
19. Thakur Meenakshi Thakur (2008): Ecotourism and Sustainable Tourism, Omega Publications, New Delhi.
20. Gitanjali, Chaudhary, Gautam P.R., (2010): Tourism Geography, Centurian Press
21. Suryawanshi Rajendra (2012): Assessment of Potentials for Eco-tourism, Lambart Publication.

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F. Y. B. A. Geography
(2023 Course under NEP 2020)
Course Code: 23ArGeoU1501
Title of the Course: Lab Course on Weather Instruments-I

Credits: 02

No. of Practical: 15

Course Objectives:

1. To acquire the knowledge of various elements of weather, weather observations and importance of weather forecasting
2. To acquaint the students with the weather instruments and their utility and applications in geographical phenomena.
3. To teach students how to collect and analyse the weather data by using basic weather instruments

	Semester -I	Practicals
Chapter 1	Introduction to weather	03
	A. Definition of weather B. Elements of weather C. Weather Observations: i. Surface Observatories ii. Space-Based Observations D. Significance of weather forecasting	
Chapter 2	Weather instruments	10
	Mechanism, Functions and Uses A. Measurement of temperature i. Simple thermometer ii. Maximum and minimum thermometer iii. Thermograph B. Measurement of humidity and precipitation i. Dry and wet bulb thermometer ii. Hygrograph iii. Rain gauge	
Chapter 3	Weather Data Collection and Analysis	02
	A. Collection of weather data (temperature, humidity and rainfall) B. Preparation of report (Report should submit into the department)	

Learning outcome:

1. Students will understand the basic concepts weather and importance of weather forecasting.

2. Students will be able to handle various weather instruments and understand its principles, functions and applications.
3. Students will familiarise with different types of weather observatories.
4. Students will be able to understand correlations of various weather elements with different geographical phenomenon.
5. The students will be able to acquire skill of weather data collection and develop practical knowledge of analysing and processing weather data and report preparation.

Reference Books:

1. Singh, G., 2005. Map work and practical geography. Vikas Publishing House Pvt. Ltd., New Delhi.
2. Monkhouse, F.J. and Wilkinson, H.R., 1971. Maps and Diagrams. Methuen and Co. Ltd., London. UK
3. Singh, L.R. and Singh, R., 1973. Map Work and Practical Geography, Central Book Depot, Allahabad.
4. Singh, R.L., 2005. Elements of Practical Geography. Kalyani Publishers, New Delhi.
5. Singh, R.L., and Dutt, P.K., 1968. Elements of Practical Geography, Students' Friends, Allahabad.

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F. Y. B. A. Geography
(2023 Course under NEP 2020)
Course Code: 23ArGeoU2101
Title of the course: Human Geography

Credits: 04

Total Lectures: 60

Objectives:

1. To introduce the students to the basic concepts in human geography.
2. To orient the students to the applications of the human geography.
3. To familiarise the students with different Geo-environmental problems.

	Semester - II	Lectures
Chapter 1	Introduction to Human Geography	15
	A. Meaning and Definitions of Human Geography B. Nature and Scope of Human Geography C. Branches of Human Geography D. Contemporary issues in Human Geography	
Chapter 2	Population	16
	A. Factors affecting on distribution of population B. Growth and distribution of world's population C. Theory of demographic transition D. Composition of Indian population (Age-sex ratio, literacy, economic, marital) E. Population as a resource	
Chapter 3	Settlements	12
	A. Types and patterns of rural settlements B. Urbanization in India C. Urban sprawl, Rural Urban fringe, Satellite towns	
Chapter 4	Economic Activities	17
	A. Types of Economic Activities: i. Primary, ii. Secondary, iii. Tertiary, iv. Quaternary v. Quinary B. Factors affecting on Economic Activities: i. Physical ii. Economical, iii. Social, iv. Cultural v. Political	

Learning Outcomes:

1. Students will understand the basic concepts of in human geography.
2. Students will understand the applications of human geography.
3. Students will familiarise the different Geo-environmental problems.

Reference Books:

1. Chandna, R.C. (2010) Population Geography, Kalyani Publisher.
2. Hassan, M.I. (2005) Population Geography, Rawat Publications, Jaipur
3. Daniel, P.A. and Hopkinson, M.F. (1989) The Geography of Settlement, Oliver & Boyd, London.
4. Musmade Arjun, Sonawane Amit and Jyotiram More, Population & Settlement Geography, (2015), Diamond Publication Pune.
5. Jyotiram More and Musmade Arjun(2015) Regional Geography of India. Diamond Publication Pune.
6. Johnston R; Gregory D, Pratt G. et al. (2008) The Dictionary of Human Geography, Blackwell Publication.
7. Jordan-Bychkov et al. (2006) The Human Mosaic: A Thematic Introduction to Cultural Geography. W. H. Freeman and Company, New York.
8. Kaushik, S.D. (2010) Manavi Bhugol, Rastogi Publication, Meerut.
9. Maurya, S.D. (2012) Manav Bhugol, Sharda Pustak Bhawan. Allahabad.
10. Sudeepta Adhikari (2016) Orient Blackswan PVT, New Delhi.
11. Sumitra Ghosh (2015), Introduction of Settlement Geography. Orient Blackswan PVT Kolkaqa.
12. Ghosh B.N.: Fundamentals of Population Geography
13. Hussin M.: Human Geography 1994
14. Money D.S.: Human Geography
15. Robinson H.: Human Geography, 1976
16. Mishra &Puri: Indian Economy 2004
17. India- 2008: Govt. of India
18. Hassan Mohammed I.: Population Geography, 2005
19. Bhende Asha & Kanitkar Tara: Principlas of Population studies
20. Perillouav: Human Geography, 1986
21. Singh, R.Y.: Geography of Settlement, 1998

22. Singh, Gopal: Mapwork& Practical Geography, 1999
23. Sawant S.B. Athavale A.S. and Musmade A H, Population Geography, Mehata publishing house, Pune
24. Chandana R.C.: Geography of Population, Kalyani Pub. Ludhayana 1988
25. S MUKHERJEE, UNDERSTANDING PHYSICAL GEOGRAPHY, ORIENT BLACKSWAN (PVT)LTD More & Devne: 2020, Introduction To Human Geography - Nirali Publication, Pune
26. Perpillou A.V. : Human Geography, Longman, London- 1986
27. V. Jagdale & P. G. Saptarshi: Human Geography (2007), Diamond Publication (Marathi)

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F. Y. B. A. Geography
(2023 Course under NEP 2020)
Course Code: 23ArGeoU2102

Title of the Course: Lab Course on Human Geography

Credits: 02

Total Practicals: 15

Objectives:

1. To introduce the students to the basic concepts in Human Geography.
2. To ascertain the students to the applications of Human Geography.
3. The student will able to get appropriate technical knowledge with appropriate concepts.

	Semester – II	Practicals
Chapter 1	Population Geography	15
	Population Indices A. Population Density B. Age-sex pyramid C. Population Growth Rate D. Population Projections E. Life Expectancy Ratio	
Chapter 2	Settlement and Economic Geography	10
	Methods for calculation Urban and Economic data A. Rank size rule B. Gravity model C. Gross National Income (GNI)	
Chapter 3	Field Study/Excursion	05
	A. Reading of maps in the field B. Collection of population data and preparation of report	

Learning Outcomes:

Students will be able to: -

1. Understand the basic concepts in Human Geography.
2. Understand the formation of different human Indices in the field.

Reference Books:

1. Dent B.D., 1999. Cartography: Thematic Map Design, (Vol. 1), McGraw Hill.
2. Gupta K.K and Tyagi V.C., 1992. Working with Maps, Survey of India, DST, New Delhi.

3. Mishra R.P. and Ramesh A., 1989.Fundamentals of Cartography, Concept Publishing.
4. Monkhouse, F.J. and Wilkinson, H.R., 1971. Maps and Diagrams. Methuen and Co. Ltd., London.
5. Pollard A.H. and Farhat Yusu: Demographic Techniques.
6. Robinson A., 1953. Elements of Cartography, John Wiley.
7. Singh, G., 2005. Map work and practical geography. Vikas Publishing House Pvt. Ltd., New Delhi
8. Singh, L.R. and Singh, R., 1973. Map work and practical geography, Central Book Allahabad
9. Steers, J.A., 1970.An Introduction to Study of Map Projections. University of London Press Ltd., London.
10. Siddhartha, K., 2006. Geography through maps, Kisalaya Publications Pvt. Ltd, Delhi
11. Singh, R.L., 2005. Elements of Practical Geography. Kalyani Publishers, New Delhi. India.
12. Singh R.L. and Singh R.P.B., 1999.Elements of Practical Geography, Kalyani Publishers.
13. Singh, R.L., and Dutt, P.K., 1968. Elements of practical geography, Students' Friends, Allahabad.

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F.Y.B.A. Geography
(2023 Course under NEP 2020)
Course Code: 23ArGeoU2301

Title of the Course: Environmental Geography

Credits: 02

Total Lectures: 30

Objectives:

1. To create the Environmental awareness amongst students.
2. To acquaint the students with fundamentals concepts of Environmental Geography.
3. To acquaint the students to past, present, and future utility and potentials of resources at regional, national, and global levels.
4. To make aware the students about problems of utilization and conservation in the view of Sustainable development.

Semester - II		Lectures
Chapter 1	Introduction: Environmental Geography	08
	A. Meaning and Definitions of Environmental Geography B. Nature and Scope of Environmental Geography C. Types of Environment D. Importance of Environmental Geography E. Approaches to the study of Environmental Geography	
Chapter 2	Ecosystem	14
	A. Meaning, definitions and concept of the ecosystem. B. Structure of Ecosystem (Biotic and Abiotic factors), Food Chain, Tropic level, Food web and Energy flow C. Types of ecosystem D. Terrestrial Ecosystem: Equatorial Evergreen Forest, Desert, Tundra E. Aquatic Ecosystem: Pond Ecosystem	
Chapter 3	Biodiversity and its conservation	08
	A. Meaning, definition and concepts of biodiversity B. Economic value and potential of biodiversity C. Loss of biodiversity D. Hotspots in India E. Conservation of biodiversity	

Learning Outcomes:

10. Students will understand the basic concepts in Environmental geography.
11. Students will understand the concepts of sustainability.
12. To gain knowledge about biodiversity and its importance.
13. To obtained and create ability to develop awareness and responsibility for the environment.

Reference Books:

1. Miller G.T., 2004, Environmental Science Working with the Earth, Thomson Books Cole, Singapore
2. Saxena H.M., 2017, Environmental Geography(Ed III), Rawat Publications, Jaipur
3. Odum E.P. et al.2005, Fundamentals of Ecology, Ceneage Learning, India
4. Sharma P.D.2015, Ecology and Environment, Rastogi Publications,Meerut
5. Kormondy, Edward J, 2012, Concept of Ecology, PHI Learning Pvt.Ltd,New Delhi
6. Singh R.B.(Eds) 2009, Biogeography and Biodiversity, Rawat Publications, Jaipur
7. Singh S,Prayag, 1997, Environment Geography, Pustak Bhawan, Allahabad
8. Chandana R.C.2002, Environmental Geography, Kalyani Publication, Ludhiana
9. Goudie A, 2001, The Nature of The Environment, Blackwell, Oxford
10. Gholap T. N., 2000, Environment Science, Nishikant Publications, Pune. (Marathi)
11. Choudhar A.H., & et. al., 2014, Disaster Management, Atharva Publication, Pune. (Marathi)
12. Musmade A. H., More J. C. 2014, Geography of Disaster Management, Diamond Publication, Pune. (Marathi)
13. Saptarshi P. G., More J. C., Ugale V. R., 2009, Geography and Natural Hazads, Diamond Publishing, Pune. (Marathi)

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F. Y. B. A. Geography
(2023 Course under NEP 2020)
Course Code: 23ArGeoU2401

Title of the Course: Geography of Tourism-II

No. of Credits: 02

Total Lectures: 30

Objectives:

- 1) To acquaint the student's basic concepts of Geography & Tourism
- 2) To aware the students with the utility and application of Tourism
- 3) To help the students & society to understand the interrelationship between tourism and employment generation opportunities.
- 4) To understand the impact of tourism on Physical and Human Environments.

	Semester – II	Lectures
Chapter 1	Determinants of Tourism Development	10
	A. Physical i. Relief ii. Climate iii. Forest B. Socio-Cultural i. Religious ii. Historical iii. Sports C. Political i) Policies ii) Safety of Tourists iii) Accessibility	
Chapter 2	Role of Infrastructure in Tourism Development	10
	A. Mode of Transportation: i. Road ii. Rail iii. Water iv. Air B. Communication: i. Role of Guide in tourism development ii. Internet/Telephone/Mobile/TV iii. Electronic and Printing Media C. Travel and Tourism Agencies	
Chapter 3	Accommodation	10
	Types of Accommodation A. Private: Hotels, motels, Inn B. Govt. accommodation: Tourist home, Guest House, Rest house, Youth Hostel, Tents, Caravans and Bed & Breakfast C. Rail Yatri bhavan D. House boats	

	E. Dharmashala	
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Learning Outcomes:

1. Students will understand the natural and manmade resources associated with tourism activity.
2. To understand different types and concepts in tourism.
3. To prepare for their employment opportunities in the field of tourism management planning and own agency.
4. To apply and understand various recent tourist agencies to manage world wide tourist destinations.
5. Appreciate the basic concepts and geographical parameters of tourism.
6. Acquire knowledge on the recent trends and patterns of tourism development in India and other countries.
7. To study the tourism motivating factors for pilgrimages, leisure, recreation, elements.

Reference Books:

1. Robinson H.(1996): A Geography of Tourism
2. Bhatia A.K., Sterling Publisher Ltd., New Delhi: Tourism Development, Principles and Practices
3. S.N. Singh (1985): Geography of Tourism and Recreation
4. Douglas Pearce (1987) Tourism Today: A Geographical Analysis
5. Mathieson A. and Wall C, Logman, U.K: Tourism: Economic Physical and Social Impact:
6. Manoj Das India: A tourist Paradise
7. Maneet Kumar Tourism Today: An Indian Perspective
8. Hudman L.E. Geography of Travel and Tourism
9. Seth P.N (1985) Sterling Publisher Ltd., New Delhi Successful Tourism Management
10. Smith S.L.J: Tourism Analysis
11. Gupta V.K: Tourism of India
12. Kaul R.N, Sterline Publisher Ltd : Dynamics of Tourism
13. Shinde S.B, Phadke Prakashana Kolhapur 2: Geography of Tourism
14. Nagktode P.M., Prof. D.Pardhi. Vidya PrakashanNagpur : Geography Tourism
15. Vitthal Gharpure., Pimplapure Publication Nagpur : Geography of Tourism.

16. Bhagwat A.V., MedhaJoshi.:Murlidhar Publication Pune :Geography of Tourism.
17. Dixit N.K,Vista International Publication Delhi: Tourism Geography.
18. Sharma A. (2008) : Tourism Development, RBSA Publishers, Jaipur.
19. Thakur Meenakshi Thakur (2008) : Ecotourism and Sustainbale Tourism, Omega Publications, New Delhi.
20. Gitanjali, Chaudhary, Gautam P.R., (2010): Tourism Geography, Centurian Press
21. Suryawanshi Rajendra (2012): Assessment of Potentials for Eco-tourism, Lambart Publication.

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F. Y. B. A. Geography
(2023 Course under NEP 2020)
Course Code: 23ArGeoU2501
Title of the Course: Lab Course on Weather Instruments-II

Credits: 02

No. of Practical: 15

Course Objectives:

1. To acquaint the students with the weather instruments and their utility and applications in geographical phenomena.
2. To teach students how to collect weather data, analyse and prepare report on it
3. To acquire the knowledge of isobaric patterns and associated weather conditions.

	Semester -II	Practicals
Chapter 1	Weather Instruments	08
	Mechanism, Functions and Usages A. Measurement of air pressure i. Aneroid barometer ii. Barograph B. Wind Direction and Velocity i. Wind Vane ii. Cup Anemometer	
Chapter 2	Isobaric pattern	04
	A. Definition of isobar B. Drawing of isobaric patterns and associated weather i. Cyclone ii. Anticyclone iii. Ridge iv. Trough v. Wedge vi. Secondary depression vii. Col	
Chapter 3	Weather Report	03
	A. Collection of weather data (air pressure, wind direction and velocity), B. Analysis and preparation of report.	

Learning outcome:

1. Students will be able to handle various weather instruments and understand its principles/functions and applications.
2. Students will aware of the drawing technique of basic pattern of isobars and associated weather conditions.

3. Students will understand correlations between various weather elements and different geographical phenomenon.
4. The students will be able to acquire skill of weather data collection and develop practical knowledge of analysing and processing weather data and report preparation.

Reference Books:

1. Singh, G., 2005. Map work and practical geography. Vikas Publishing House Pvt. Ltd., New Delhi.
2. Monkhouse, F.J. and Wilkinson, H.R., 1971. Maps and Diagrams. Methuen and Co. Ltd., London. UK
3. Singh, L.R. and Singh, R., 1973. Map Work and Practical Geography, Central Book Depot, Allahabad.
4. Singh, R.L., 2005. Elements of Practical Geography. Kalyani Publishers, New Delhi.
5. Singh, R.L., and Dutt, P.K., 1968. Elements of Practical Geography, Students' Friends, Allahabad.