

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

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

Syllabus

To be implemented from Academic Year 2024-25

Semester	Paper	Subject code	Title of Paper	No. of credits
Semester III				
S.Y.B.A. Sem III	Major Paper 5 (Theory)	23ArGeoU3101	Geography of Maharashtra-I	4
	Major Paper 6 (Practical)	23ArGeoU3102	Lab Course on Map Projections	2
	Major Paper 7 (IKS)	23ArGeoU1901	Ancient Indian Geographical Thoughts	2
	Minor (Minor Paper II)	23ArGeoU3301	Economic Geography	4
	OE	23ArGeoU3401	Geography of Disaster Management –I	2
	VSC (Major Specific Practical)	23ArGeoU3501	Lab Course on Geographical Data Acquisition and Analysis	2
	FP (FP 1)	23ArGeoU3002	Field Project I	2
Semester IV				
S.Y.B.A. Sem IV	Major Paper 8 (Theory)	23ArGeoU4101	Geography of Maharashtra-II	4

	Major Paper 9 (Practical)	23ArGeoU4102	Lab Course on Surveying	4
	Minor (Minor Paper III)	23ArGeoU4301	Introduction to Population and Settlement Geography	4
	OE	23ArGeoU4401	Agriculture Geography	2
	FP (CEP-I)	23ArCopU4003	Community Engagement Project	2

Progressive Education Society's
Modern College of Arts, Science and Commerce (Autonomous), Shivajinagar, Pune 05
S.Y.B.A. Geography
(2023 Course under NEP 2020)
Course Code: 23ArGeoU3101

Title of the Course: Geography of Maharashtra-I

Credits: 04

Exam scheme: CIE-40 Marks

Total Lectures: 60

ESE-60 Marks

Objectives:

1. To appraise the students with salient features of the Maharashtra State.
2. To familiarize the students with the physiographic characteristics of the State.
3. To make the students aware of the geographic problems of Maharashtra and prospects at the state level.

	Semester – III	Lectures
Unit 1	Administrative Set Up	10
	A. Formation of the Maharashtra State B. Geographical Location and Adjoining States C. Administrative Divisions D. Maharashtra in the Context of India	
Unit 2	Relief and Drainage	15
	A. Physical Structure: Konkan Plain, Maharashtra Plateau, Western Ghat/Sahyadri and Hill Ranges B. Major Rivers and their tributaries: i. West flowing: Narmada and Tapi ii. East flowing rivers: Godavari, Bhima and Krishna iii. Rivers in Konkan	
Unit 3	Climate and Soil	18
	A. Seasons and Associated Weather Conditions: Summer, Rainy, October heat and Winter B. Temperature and Rainfall distribution in Maharashtra C. Koppen's and Trewartha's climatic classification: Maharashtra D. Soil: Classification, Distributions and Problems of soil in Maharashtra, Methods and Role of government in Soil Conservation in Maharashtra	
Unit 4	Natural Vegetation and wildlife	15
	A. Natural vegetation: Types and Distribution and Problems related to forests in Maharashtra, Methods and Role of Government in forest conservation in Maharashtra B. Distribution of wildlife sanctuaries and national parks in Maharashtra	
Unit 5	Experiential learning and field visit	02
	A. Field visit within Maharashtra to learn about the physiography, climate, soil, natural vegetation and wildlife distribution and preparation of report	

Course Outcomes:

Students will be able to:

1. Understand the location, physiography, drainage, historical and geographical features of Maharashtra.
2. Learn overall scientific and micro level analytical study of Maharashtra.
3. Acquire general information of major rivers and soil types of Maharashtra.
4. Understand the climate and natural vegetations of Maharashtra.
5. Acquainted with the distribution of wildlife within the state.
6. Get wide view of observational skills related to local, physiographical and natural phenomena through field visit.

Reference Books:

1. Bhaise, S. D., & Mhaski, D. A. (n.d.). *Maharashtracha Prakrutik Bhugol*. Atharva Publication. Jalgaon.
2. Bhamare, S. M. (2013). *Geography of Maharashtra*. Prashant Publication. Jalgaon.
3. Dasthane, S. (2002). *Maharashtra*. Ramchandra and Company. Pune.
4. Deshpande, C. D. (1973). *Geography of Maharashtra*. Lawrence Verry Incorporated,
5. Diddee, J., Jog, S. R., Kale, V. S., & Datye, V. S. (n.d.). *Geography of Maharashtra*. Rawat Publication. Jaipur.
6. Dixit, K. R. (1986). *Maharashtra in Maps*. Maharashtra state board for literature and culture, Bombay.
7. Hange, A. K., & Waghmare, H. S. (2018). *Geography of Maharashtra*. Kailas.
8. Kamble, V. B., (2023). *Maharashtracha Bhugol*. Fern International Publication. Pune.
9. Magar, J. (n.d.). *Maharashtracha Bhugol*.
10. Patil, S. (2019). *Geography of Maharashtra*. Prashant Publication. Jalgaon.
11. Sarang, S. (1997). *Maharashtra Bhugol*. Vidya Prakashan. Meerut.
12. Savadi, A. B. (n.d.). *Maharashtracha Bhugol*. Nirali Prakashan. Pune.
13. Savadi, A. B., & Keche, V. (n.d.). Maharashtra.
14. Singh, R. L. (2012). *India: A Regional Geography*. National Geographical Society of India.

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S.Y.B.A. Geography (NEP)
(2023 course under NEP 2020)
Course Code: 23ArGeoU3102

Title of the Course: Lab Course on Map Projections

Credits: 02

Exam scheme: CIA-20 Marks

Total Practical: 15

ESE-30 Marks

Note:

1. Use of calculator is allowed.
2. Students must check the practical regularly and Journal should be certified by practical in-charge and Head of the Department before the examination.
3. Students without a certified journal should not be allowed for the practical examination.
4. Each of the practical batches should get a separate question paper.

Objectives:

1. To acquaint the students with basic concepts, classification and uses of Map Projections.
2. To make students familiar with the concepts of local time, standard time and time zone calculations
3. To enable the students about the construction and applications of various Projections.

	Semester – III	Practicals
Unit 1	Introduction to Map Projection	02
	A. Basic Concepts of Projection: Latitude, Longitude, Parallels of Latitude, Meridians of Longitude, Prime meridian, Equator, Directions B. Definition, Classification, Choice and need of Map Projection C. Time zones calculations (Minimum two examples)	
Unit 2	Construction, properties and use of map projections	06
	Construction of above map projection with properties and uses of each group: one example from each hemisphere A. Zenithal Polar projection i. Zenithal Polar Gnomonic Projection B. Conical Projection i. Projection with one standard parallel C. Cylindrical Projection i. Cylindrical equal area Projection	
Unit 3	Non-Conventional and Conventional Map Projection	07
	A. Bonne's Projection B. Mercator's Projection C. Universal Transverse Mercator (UTM) Projection	

Course Outcomes:

The students will be able to:

1. Learn the basic concepts, classification and uses of Map Projections
2. Acquaint with the concepts of the latitude, longitude and directions
3. Acquire the knowledge of various projections on the basis of developable surface such as Zenithal, conical and cylindrical.
4. Differentiate the various projections on the basis of source of light such as gnomonic, and stereographic
5. Understand the applicability of various conventional map projections.
6. Analyse errors and derive unknown elements related to map projections.

Reference Books:

1. Ahirrao, D. Y., & Karanjkehele, E. K. (2002). *Pratyakshik Bhugol*. Sudarshan Prakashan. Pune.
2. Basak, N. N. (2014). *Surveying and Levelling*. McGraw Hill Education (India) Pvt. Ltd. Noida, Uttar Pradesh.
3. Bygott, J. (1964). *Introduction to Map work and Practical Geography*. University Tutorial Press. London.
4. Davis, R. E., & Foote, F. S. (1940). *Surveying-theory and practice*. McGraw-Hill Book Co. Noida, Uttar Pradesh.
5. Deshpande, G. B. (1991). *Surveying*. Everest Publishing House. Pune.
6. Kanetkar, T. P., & Kulkarni, S. V. (2010). *Surveying and Levelling (Part I and II)*. Vidyarthi Gruha Prakashan. Pune.
7. Khan, M. Z. A. (1998). *Textbook of Practical Geography*. Concept Publishing Company.
8. Kumbhare, A. (n.d.). *Pratyakshik Bhugol*. Kalyani Prakashan. New Delhi.
9. Mishra, R. P., & Ramesh, A. (2000). *Fundamentals of Cartography*. Concept Publishing Company. Delhi.
10. Monkhouse, F. J., & Wilkinson, H. R. (1989). *Maps & Diagrams*. B.I Publications Pvt. Ltd. New Delhi.
11. Saha, P., & Basu, P. (2013). *Advanced Practical Geography*. Books and Allied (P) Ltd. Kolkata.
12. Singh, G. (2009). *Map Work and Practical Geography*. Vikas Publishing House Pvt. Ltd. New Delhi.
13. Singh, L. R., & Singh, R. (1973). *Map work and Practical Geography*. Central Book Depot.

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S. Y. B. A. Geography
(2023 Course under NEP 2020)
Course Code: 23ArGeoU1901

Title of the Course: Ancient Indian Geographical Thoughts

Credits: 02

Total Lectures: 30

Objectives:

1. To understand contribution of Ancient Indian Philosopher.
2. To acquaint the students with idea of evolution of Indian geographical thinking and Information.

	Semester – I	Lectures
Chapter 1	Ancient Geographical Concepts	13
	Fundamental Concepts in Geography A. The Universe and its Origin B. Earth: Size of Earth C. Continents (Dwipas) D. Latitudes and Longitudes (Akshansa and Deshantar) E. Cardinal Points F. Calendar	
Chapter 2	Contribution of Indian Geographers	17
	Ancient Period A. Valmiki B. Varahmihira C. Brahmagupta D. Aryabhatta E. Bhaskaracharya F. Bhattila G. Utpala H. Vijaynandi I. Kautilya	

Learning Outcomes:

Students will be able to: -

1. Understand the contributions of Ancient Indian Philosophers.
2. Acquaint with the idea of evolution of Indian geographical thinking and Information.

Reference Books:

1. B. Datta and A. N. Singh, History of Hindu Mathematics, 2 Parts, Lahore 1935, 1938; Reprint, Asia Publishing House, Bombay 1962; Reprint, Bharatiya Kala Prakashan, Delhi 2004.
2. C. N. Srinivas Iyengar, History of Indian Mathematics, The World Press, Calcutta 1967.
3. R. D. Dikshit, Geographical Thought: A Contextual History of Ideas. PHI Learning, 2nd Edition (30 April 2018)
4. Sathapati, V. Ganapati. 2001. Indian Sculpture and Iconography-Forms and Measurements, Auro Publications.
5. T. A. Saraswati Amma, Geometry in Ancient and Medieval India, Motilal Banarsidass, Varanasi 1979.

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S. Y. B. A. Geography
(2023 course under NEP 2020)
Course Code: 23ArGeoU3301
Title of the Course: Economic Geography

Credits: 04

Exam scheme: CIE-40 Marks

Total lectures:60

ESE-60 Marks

Course Objectives:

1. To introduce the students with the subject matter and application of Economic Geography and its significance as sub-field of geography.
2. To enable the students to analyze the spatial patterns of economic activities at different scales.
3. To make students aware of the various factors of economic development and to acquaint the students about history of economic development in India.
4. To provide knowledge of the processes of global economic forces shaping local economies and how countries and regions interact through trade and investment.

	Semester III	No. of lectures
Unit 1	Introduction to economic geography	10
	A. Nature and scope of economic geography B. Economic geography and its relation with social sciences C. Recent trends of economic geography	
Unit 2	Economic Activity	08
	A. Definition and Classification of Economic activity: - (Primary, Secondary, Tertiary, Quaternary, Quinary) B. Determinants of economic activities	
Unit 3	Agriculture	15
	A. Origin, significance and Classification of Agriculture B. Factors influencing agriculture- physical, economic, socio-cultural, technological	
Unit 4	Industries, Transportation and Trade	17
	A. Classification of Industries, factors affecting location of Industries B. Distribution of major Industries in the world i. Iron and Steel Industry ii. Cotton Textile Industry C. Transportation: Various Modes & influencing factors D. Trade: Types, influencing factors, WTO	
Unit 5	Economic Development	10
	A. Measures of economic development B. Classification of countries on the basis of economic development C. Pre and post economic development in India	

Course Outcomes:

The student will be able to:

1. Learn the nature, scope, recent trend of economic geography and its relations with other social science.
2. Understand the concepts, classification and affecting factors of economic activities.
3. Acquaint with the various classification, affecting factors and global distribution of agriculture and industries.
4. Learn the various modes of transportation, affecting factors and economic significance.
5. Examine the trading scenarios of the world by understanding the definition, types and affecting factors of international trade, role of WTO.
6. Develop skills in analyzing the interconnectedness of economies, their level of economic development, and history of economic development in India.

Reference Books:

1. Das Gupta, A. (1968). *Economic & Commercial Geography*. Calcutta A Mukharji and Com.
2. Dreze, J., & Sen, A. (1996). *Economic Development and Social Opportunity*. Oxford University Press.
3. Dubey, R. S., & Singh, L. A. (year). *Economic & Commercial Geography*. Publisher.
4. Gautam, A. (2010). *Advanced Economic Geography*. Sharada Pustak Bhavan.
5. Hanink, D. M. (1997). *Principles and Applications of Economic Geography, Economy, Policy, Environment*. John Wiley and Sons.
6. Hartshorne, T. A., & Alexander, J. W. (1988). *Economic Geography*. Prentice Hall.
7. Hussain, M. (2007). *Models in Geography*. Rawat Publication. Jaipur.
8. Janaki, V. A. (1985). *Economic Geography*. Concept Publishing Co.
9. Knox, P., & Agnew, J. (1998). *The Geography of the World Economy*. Arnold.
10. Lloyd, P., & Dicken, P. (1972). *Location in space: A theoretical approach to Economic Geography*. Harper and Row. New York.
11. Mamoria, C. B. (1980). *Economic and Commercial Geography of India*. Shiva Lal Agarwal and Company. Agra.
12. McCarty, H. H., & Lindberg, J. B. (1966). *A Preface to Economic Geography*. Prentice.
13. Thomas, C. W., Conkling, E. J., & Yeates, M. (1974). *Geography of Economic Activity*. McGraw Hill.

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S. Y. B. A. Geography
(2023 Course under NEP 2020)
Course Code: 23ArGeoU3401
Title of the Course: Geography of Disaster Management-I (Open Elective)

No. of Credits: 02
Exam scheme: CIA-20 Marks

Total Lectures: 30
ESE-30 Marks

Objectives:

1. To introduce students with the concept of disaster & its relation with Geography.
2. To acquaint the students with the various disaster in different areas & its
3. management.
4. To make the students aware of disaster mitigation and resilience.

	Semester – III	Lectures
Unit 1	Introduction to Disasters	06
	A. Meaning and definitions of hazard and disaster B. Geographical conditions and disasters C. Classification of disasters	
Unit 2	Disaster Management: Structure and Process	10
	A. Aims and objectives of disaster management B. Structure of disaster management cycle i. Pre-disaster management: Preparedness, Mitigation and Prevention ii. Post-disaster management: Rescue, Response, Recovery, Rehabilitation C. Disaster Management Act 2007	
Unit 3	Landslide and Flood	12
	A. Landslide: Causes, effects, geographical distribution, pre and post management B. Flood: Causes, effects, geographical distribution, pre and post management	
Unit 4	Experiential learning and field visit	02
	A. Field visit to observe the vulnerability of local or regional hazard B. Group discussion on hazard, vulnerability, manageability and risk assessment	

Course Outcomes:

Students will be able to:

1. Understand the natural and manmade disasters
2. Develop ability to understand local, regional and global hazards/ disaster management process.
3. Acquainted with the causes, effects, distribution and management of landslide and

flood disaster.

4. Formulate rehabilitation plans for disaster affected communities and develop the skills of disaster prevention, disaster planning and management.
5. Get wide view of observation skills related to local and regional disasters through field visits.
6. Improve their socio-economic responsibilities by undertaking group discussion and effective communication.

Reference books:

1. Alexander, D. (1993). *Natural Disasters*. UCL Press Ltd., London.
2. Alexander, D. (2000). *Introduction in Confronting Catastrophe*. Oxford University Press.
3. Andharia, J. (2008). *Vulnerability in Disaster Discourse*. JTCDM, Tata Institute of Social Sciences Working Paper no. 8.
4. Blakie, P., Cannon, T., Davis, I., & Wisner, B. (1997). *At Risk Natural Hazards, People Vulnerability and Disasters*. Routledge.
5. Bloom, A. L. (1998). *Geomorphology. A Systematic Analysis of Late Cenozoic Landforms*. Pearson Education (Singapore) Pte. Ltd.
6. Chandna, R. C. (2000). *A Geography of Population, Concepts, Determinants and Patterns*. Kalyani Publishers, New Delhi.
7. Copola, P. D. (2007). *Introduction to International Disaster Management*.
8. Cuny, F. (1983). *Development and Disaster*. Oxford University Press.
9. Govt. of India. (2005). *Disaster Management Act*. Government of India, New Delhi.
10. Hamblin, W. K. (1989). *The Earth's Dynamic Systems*. Macmillan Publishing Company, New York.
11. Huggett, D. A. (2004). *Fundamentals of Biogeography*. Routledge.
12. Kale, V. S., & Gupta, A. (2001). *Introduction to Geomorphology*. Orient Longman. Hyderabad.

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S. Y. B. A. Geography
(2023 course under NEP 2020)
Course Code: 23ArGeoU3501 (VSC)
Title of the Course: Lab Course on Geographical Data Acquisition and Analysis

Credits: 02

Exam scheme: CIA-20 Marks

Total Practicals:15

ESE- 30 Marks

Notes:

1. Use of computer and calculator are allowed.
2. Journal should be completed and duly certified by practical In-charge and Head of the Department.

Objectives:

1. To introduce the students with the methods of geographical data acquisition from various sources.
2. To introduce the students with analyzing hands-on skills using simple computing technique like MS excel.
3. To ascertain the students with the application of various geographical open-source software, web portal and apps.
4. To acquaint the students with collection, visualization, and interpretation of geographical data.

	Semester III	No. of Practicals
Unit 1	Introduction to Geographical Data Acquisition	04
	A. Definition of Data, Data Acquisition, and Data Analysis B. Data sources (Primary and secondary Data Sources) i. Fieldwork and Surveys ii. Published data and Reports and maps iii. Remotely sensed data iv. GPS coordinates C. Use of internet in data acquisition from web portals i. Downloading population and socio- economic data from census and Maharashtra state Data bank portal ii. Downloading satellite data from Bhuvan web portal iii. Downloading SOI Toposheets from survey of India's web portal	
Unit 2	Graphical and Diagrammatic Representation of data	08
	Construction and interpretation A. Line graph B. Polyline graph C. Simple bar diagram D. Multiple bar diagram	

	E. Compound bar diagram F. Pie diagram G. Use of Excel software for representation and analysis of geographical data (any two graph and diagram mentioned above)	
Unit 3	Thematic mapping of data	03
	Construction and interpretation A. Dot map B. Choropleth map C. Use of QGIS software for the preparation of thematic maps	

Course Outcomes:

Students will be able to:

1. Understand the concept of data acquisition and analysis in the subject of Geography.
2. Collect field data with the help of different techniques and tools.
3. Comprehend the application of various geographical apps and use of internet regarding those.
4. Access the various services of Maha Data Bank, Bhuvan web portal.
5. Learn hands-on skills by using simple computing technique like MS excel.
6. Understand the both manual as well as software-based construction and interpretation of thematic mapping of geographical data.

Reference Books:

1. Ahirrao, D. Y., Karanjkehele, E. K., (2002). *Pratyakshik Bhugol*. Sudarshan Publication, Nashik.
2. Burrough, P.A. & McDonnell, R.A. (2000). *Principles of Geographical Information System*. Oxford University Press.
3. Chang Kang Sung. (2002). *Introduction to GIS*. Tata McGrow Hill, New Delhi.
4. Creswell, J. (1994). *Research Design: Qualitative and Quantitative Approaches*. Sage Publications.
5. Dikshit, R. D. (2003). *The Art and Science of Geography: Integrated Readings*. Prentice-Hall of India, New Delhi..
6. Karlekar, S. N., (2008). *Statistical Methods*. Diamond Publication, Pune.
7. Lo, C.P. & Yeung, A.K.W. (2002). *Concepts and Techniques of Geographic Information System*. Prentice Hall, India.
8. Phillips, R. & Johns, J. (2012). *Fieldwork for Human Geography*. Sage Publication.
9. Sarkar, A. (2015). *Practical Geography: A Systematic Approach*. Orient Black Swan.
10. Singh, G. (1996). *Map Work and Practical Geography*. Vikas Publications, New Delhi.
11. Singh, R.L. (1979). *Elements of Practical Geography*. Kalyani Publications, New Delhi.
12. Stoddard, R. (1982). *Field Techniques and Research Methods in Geography*. Kendall/Hunt Publishing Company.
13. Stoddard, R.H. (1982). *Field Techniques and Research Methods in Geography*. Kendall/Hunt.
14. Summer, G. (1978). *Mathematics for Physical Geographers*. John Wiley, New York.

15. Wolcott, H. (1995). *The Art of Fieldwork*. Alta Mira Press, Walnut Creek, CA.
17. Yeats, M.H. (1974). *An Introduction to Quantitative Analysis in Human Geography*.

Internet sources

- <https://www.wikihow.com/Create-a-Graph-in-Excel>
- <https://surveyofindia.gov.in/>(Survey of India)
- <https://bhuvan.nrsc.gov.in/home/index.php>
- <https://mahasdb.maharashtra.gov.in/>
- <https://censusindia.gov.in/census.website/>
- Microsoft Excel Manual and help file.
- Basics of Windows Operating System.

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S.Y.B.A. Geography
(2023 course under NEP 2020)
Course Code: 23ArGeoU4101

Title of the Course: Geography of Maharashtra- II

Credits: 04

Exam scheme: CIE-40 Marks

Total Lectures: 60

ESE-60 Marks

Objectives:

4. To appraise the students with salient features of the Maharashtra State.
5. To familiarize the students with the demographic, economical and socio-cultural characteristics of the State.
6. To make the students aware of the problems and prospects of agriculture, and industrial sector at the state level.

	Semester – IV	Lectures
Unit 1	Population	15
	A. Trends of Population growth and Distribution B. Pattern of Population density, Migration in Maharashtra C. Composition of population: Age-Sex, Occupational, Religious, Literacy Rate D. Socio-cultural and economical aspects major Tribes: Bhills, Gond, Katkari, Warli, Koli	
Unit 2	Settlement	10
	A. Patterns, Growth and Problems of Rural Settlement in Maharashtra B. Distribution and Classification of Towns, Urbanization in Maharashtra	
Unit 3	Agriculture	15
	A. Major crops: location, climate, distributions and production i. Food crops: Jawar, Bajra, Rice, Wheat ii. Cash Crops: Sugarcane, Cotton iii. Horticulture Crops: Mango, Banana, Grapes. B. Dry farming: regions and management C. Problems and Prospects of agriculture in Maharashtra	
Unit 4	Industries and Transportation	15
	A. Major Industries: location and distribution (Sugar Industries, Chemical Industries, Automobile Industries and Tourism Industries) B. Problems and prospects of industrial development in Maharashtra C. Modes of Transportation in Maharashtra: Roadways, Railways and Airways	

Unit 5	Experiential learning and Field Visit	05
	A. Field Visit within Maharashtra to learn the demographic, economical and socio-cultural features and preparation of report of it. B. Observational skill: Agro-based regional processing unit C. Discussion on “Drought Prone Area in Maharashtra”: Issues and Management.	

Course Outcome:

Students will be able to:

1. Understand the demographic characteristics and give emphasis on local issues and well-being of the various communities of Maharashtra.
2. Acquaint with the socio-cultural and economical aspects as well as associated issues faced by major tribes of Maharashtra.
3. Learn overall analytical study of rural and urban settlement of Maharashtra.
4. Acquire the knowledge of geographical conditions, distribution, problem and prospects of major crops, dry farming and overall agricultural development of Maharashtra.
5. Understand the distribution, problem and prospects of major industries, modes of transportation and associated developmental scenario in Maharashtra
6. Get wide view of observational skills related to agro-based regional processing unit through field visit.

Reference Books:

1. Bhaise, S. D., & Mhaski, D. A. (n.d.). *Maharashtracha Prakrutik Bhugol*. Atharva Publication. Jalgaon.
2. Bhamare, S. M. (2013). *Geography of Maharashtra*. Prashant Publication. Jalgaon.
3. Dasthane, S. (2002). *Maharashtra*. Ramchandra and Company. Pune.
4. Deshpande, C. D. (1973). *Geography of Maharashtra*. Lawrence Verry Incorporated,
5. Diddee, J., Jog, S. R., Kale, V. S., & Datye, V. S. (n.d.). *Geography of Maharashtra*. Rawat Publication. Jaipur.
6. Dixit, K. R. (1986). *Maharashtra in Maps*. Maharashtra state board for literature and culture, Bombay.
7. Hange, A. K., & Waghmare, H. S. (2018). *Geography of Maharashtra*. Kailas.
8. Kamble, V. B., (2023). *Maharashtracha Bhugol*. Fern International Publication. Pune.
9. Magar, J. (n.d.). *Maharashtracha Bhugol*.
10. Patil, S. (2019). *Geography of Maharashtra*. Prashant Publication. Jalgaon.
11. Savadi, A. B., & Keche, V. (n.d.). Maharashtra.
12. Singh, R. L. (2012). *India: A Regional Geography*. National Geographical Society of India.
13. Sarang, S. (1997). *Maharashtra Bhugol*. Vidya Prakashan. Meerut.
14. Savadi, A. B. (n.d.). *Maharashtracha Bhugol*. Nirali Prakashan. Pune..

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S.Y.B.A. Geography
(2023 course under NEP 2020)
Course Code: 23ArGeoU4102

Title of the Course: Lab Course on Surveying

Credits: 04

Exam scheme: CIE-40 Marks

Total Practicals: 30

ESE-60 Marks

Note:

1. Use of calculator and computer is allowed at the time of examination.
2. Students must get the practicals checked regularly and Journal should be certified by practical in-charge and Head of the Department before the examination.
3. Students without a certified journal should not be allowed for the practical examination.
4. Each of the practical batches should get a separate question paper.

Objectives:

1. To understand the field surveying methods.
2. To study and understand the advanced survey concepts.
3. To acquaint the students with the principles of surveying, its importance and utility in the Geographical study.
4. To get familiar with the basic aspects of linear, vertical and angular measurements of surveying.
5. To introduce the importance, basic principles and uses of GPS in surveying.
6. To identify sources and types of errors occurs during surveying.

	Semester – IV	Practicals
Unit 1	Introduction of Surveying	02
	A. Definition and Importance of Surveying in Geography B. Classification and Methods of Surveys C. Directions: Various Methods of deciding North Direction- True, Magnetic and Grid North D. Measurement and Conversion of Area in Different Units i. Sq. Meter to Guntha ii. Sq. Meter to Acre iii. Bigha to hectare iv. Sq. Foot to Acre v. Sq. Mile to hectare	
Unit 2	Plane Table and Prismatic Compass Survey	06
	A. Plane Table Survey: - i. Introduction, parts of Instruments, Merits and Demerits, ii. Methods of Plane Table Survey: Radiation method-based examples B. Prismatic Compass Survey: - i. Introduction, Structure and functions prismatic compass with diagram, Merits and Demerits ii. Methods of Prismatic Compass Survey (Open Traverse) iii. Conversion of bearing (WCB to QB and QB to WCB)	

	iv. Correction of bearing and closing error by Bowditch Method	
Unit 3	GPS Survey	04
	A. Features, Segments, and application B. Location Mapping using GPS	
Unit 4	Excursion/ Field visit-report writing	02
	A. Visit to any geographically significant location anywhere in the country and report writing.	

Course Outcomes:

The students will be able to:

1. Develop the practical knowledge and application of surveying methods.
2. Understand new techniques of advanced surveying.
3. Acquaint with the various plotting methods.
4. Categorise the terrain gradient.
5. To collect appropriate information through GPS survey.
6. Obtain skill about measurements of field, farm, land-use/land-cover and preparation of proper maps with the help of traditional and advanced instruments i.e. GPS.
7. Understand topographic undulations and mapping skills.
8. Design appropriate village/town developmental plan with the help of course knowledge.

Reference Books:

- 1) Bygott J. (1964). *Introduction to Map Work and Practical Geography*. University Tutorial Press. London.
- 2) Davis R. E., & Foote F. S. (1940). *Surveying-theory and practice*. McGraw-Hill Book Co., New York.
- 3) Deshpande G. B. (1991). *Surveying*. Everest Publishing House, Pune.
- 4) Kanetkar T. P., & Kulkarni S. V. (2010). *Surveying and Levelling (Part I and II)*, Pune Vidyarthi Gruha Prakashan, Pune.
- 5) Khan M. Z. A. (1998). *Textbook of Practical Geography*. Concept publishing company, New Delhi.
- 6) Mishra, R. P., & Ramesh A. (2000). *Fundamentals of Cartography*. Concept Publishing Company, New Delhi.
- 7) Monkhouse, F. J., & Wilkinson, H. R. (1989). *Maps & Diagrams*. B.I Publications Pvt. Ltd, New Delhi.
- 8) Robinson A. H., & Sleep, R. D. (1969). *Elements of Practical Geography*, John Wiley. New York.
- 9) Singh Gopal (2009). *Map Work and Practical Geography*. Vikas Publishing House Pvt. Ltd., New Delhi.
- 10) Singh L. R., & Singh R. (1973). *Map work and Practical Geography*. Central Book Depot. Allahabad.
- 11) Singh R. L. & Kanaujia L. R. S. (1970). *Map Work and Practical Geography*. Allahabad Central Book Depot, Allahabad.
- 12) Singh R. L., & Dutt P. K. (1979). *Elements of Practical Geography*. Kalyani Publications, New Delhi.
- 13) Singh R. L., & Singh R. P. B. (1997). *Elements of Practical Geography*. Kalyani Publishers, New Delhi.

Progressive Education Society's
Modern College of Arts, Science and Commerce (Autonomous), Shivajinagar, Pune 05
S. Y. B. A. Geography
(2023 course under NEP 2020)
Course Code:23ArGeoU4301

Title of the Course: Introduction to Population and Settlement Geography

Credits: 04

Exam scheme: CIE-40 Marks

Total Lectures: 60

ESE-60 Marks

Objectives:

1. To introduce the students to the scope and importance of the discipline of Population and Settlement geography.
2. To get clear idea of the evolution and the scope of the discipline, past, present and future scenario of population trends.
3. To understand the concepts various demographic attributes and HDI.
4. To get acquainted with the concepts of site and situation, classification of settlement, basic models and theories along with examples.

	Semester IV	No. of lectures
Unit 1	Introduction to population geography	08
	A. Significance, Nature and Scope of population geography B. Population – Resources Relationship C. Sources of population data: - Census, National Sample Survey and other Sources	
Unit 2	Population Growth and Distribution	15
	A. Factor influencing growth and distribution of population (geographical, economical, socio-cultural) B. Global Trends of Population Growth C. Determinants of Population Change: Fertility, Mortality and Migration D. Human Development Index	
Unit 3	Introduction to settlement geography	12
	A. Significance, Nature and Scope of settlement geography B. Basic Concepts in settlement geography: Nodality, Centrality, Range, Threshold and Hierarchy C. Factor influencing growth and distribution of settlements (Physical, Economic, Social and Political)	
Unit 4	Rural and urban settlement	15
	A. Characteristics of rural and urban settlement B. Classification of rural settlement on the basis of (Evolution, Location, Function, Pattern, Spacing) C. Types of urban settlement on the basis of population and function	
Unit 5	Theory of population and settlement geography	10
	A. Christaller's Central Place Theory B. Demographic Transition Model	

Course outcome

The students will be able to:

1. Learn the nature, scope and significance of population and settlement geography.
2. Examine the trends of global population growth and affecting factors.
3. Critically evaluate the various demographic attributes such as fertility, mortality, migration and discuss the scenario of HDI.
4. Analyse the various concepts and affecting factors of settlement.
5. Understand the definition, characteristics and classifications of rural and urban settlement.
6. Apply theories and concepts of population and settlement geography to real-world situations.

Reference books:

1. Bhende, A., & Kanitkar, T. (1985). *Principles of Population Studies*. Himalayan Publishing House, Mumbai.
2. Boserup, E. (1965). *The Conditions of Agricultural Growth*. G. Allen and Unwin, London.
3. Chandana, R. C., & Sidhu, M. S. (1980). *Introduction to Population Geography*. Kalyani Publishers, Ludhiana.
4. Clarke, J. L. (1992). *Population Geography*. Pergamon Press, Oxford.
5. Demko, G. J., Rose, H. M., & Schnell, G. A. (1979). *Population Geography: A Reader*. McGraw Hill, New York.
6. Dubey, R. M. (1981). *Population Dynamics in India*. Chugh Publications, Allahabad.
7. Malthus, T. R., & Gilbert, G. (1999). *An Essay on the Principles of Population*. Oxford University Press, USA.
8. Mandal, R. B., Uyanga, J., & Prasad, H. (1989). *Introductory Methods in Population Analysis*. Concept Publishing, New Delhi.
9. Preston, S. H. (2000). *Demography: Measuring and Modeling Population Processes*. Wiley-Blackwell. New Jersey.
10. Sundaram, K. V., & Nangia, S. (1985). *Population Geography*. Heritage, New Delhi.

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S. Y. B. A. Geography
(2023 course under NEP 2020)
Course Code: 23ArGeoU4401 (Open Elective)
Title of the Course: Agriculture Geography

Credits: 02

Exam scheme: CIA-20 Marks

Total lectures: 30

ESE-30 Marks

Objectives:

- 1) To introduce the students with the concepts and recent trends in Agriculture Geography, innovative technologies on agricultural practices and productivity.
- 2) To understand the characteristics, practices, and challenges associated with each agricultural type, including their suitability to specific geographic regions, environmental impacts, and socio-economic implications.
- 3) To analyze the factors influencing the choice and adoption of different agricultural types.
- 4) In order to develop strategies for optimizing agricultural productivity, sustainability and rural livelihoods.

	Semester IV	No. of lectures
Unit 1	Introduction to Agriculture Geography	06
	A. Origin and dispersal of agriculture B. Definition, Nature and Scope of Agriculture Geography C. Recent trends in Agriculture Geography	
Unit 2	Determinants of Agriculture	08
	A. Physical Determinants B. Economic Determinants C. Social Determinants D. Technological Determinants	
Unit 3	Types of Agriculture	10
	Characteristics and practices A. Shifting cultivation B. Subsistent Farming C. Commercial Grain Farming D. Mixed Farming E. Horticulture F. Plantation Agriculture G. Recent concepts in Agriculture (Organic farming, Agro-tourism)	
Unit 4	Problem and Prospects of Agriculture in India	06
	A. Significance of agriculture in Indian Economy B. Problems faced by Indian agriculture C. Prospects of agricultural development in India	

Course Outcomes:

The student will be able to:

1. Understand the definitions, concepts, nature and scope of Agricultural Geography.
2. Distinguish between different concepts of agriculture and apply the knowledge in actual practice.
3. Examine the various determinants and associated factors of agriculture.
4. Classify the types of agriculture in terms of characteristics, practices, and associated Challenges.
5. Analyze and illustrate the significance, problems and prospects of agriculture in India.
6. Compare different agricultural types according to climatic conditions.

Reference Books:

1. Aiyer, A.K.Y.N. (1949). *Agricultural and Allied Arts in Vedic India*. Bangalore Press.
2. Bayliss Smith, T.P. (1987). *The Ecology of Agricultural Systems*. Cambridge University Press, London.
3. Berry, B.J.L., et al. (1976). *The Geography of Economic Systems*. Prentice Hall, New York.
4. Brown, L.R. (1990). *The Changing World Food Prospects - The Nineties and Beyond*.
5. Dyson, T. (1996). *Population and Food, Global Trends and Future Prospects*. Routledge, London.
6. Gregor, H.P. (1970). *Geography of Agriculture*. Prentice Hall, New York.
7. Grigg, D.G. (1964). *An Introduction to Agricultural Geography*. Hutchinson & Co. Ltd.,
8. Grigg, D.G. (1974). *The Agricultural Systems of the World: An Evolutionary Approach*.
9. Illbery, B.W. (1985). *Agricultural Geography, Social & Economic Analysis*. Oxford University Press.
10. Morgan, W.B. & Monton, S.C. (1971). *Agricultural Geography*. Methuen, London.
11. Randhawa, M.S. (1980). *A History of Agriculture in India, Vols. I, II, III, IV*. ICAR, New Delhi.
12. Singh, J. & Dhillon, S.S. (1994). *Agricultural Geography*. Tata McGraw Hill, Publishing Co. Ltd.
13. Symons, L. (1970). *Agricultural Geography*. G. Belt and Sons Ltd., London.
14. Tarrant, J.R. (1970). *Agricultural Geography*. David and Charles, Newton Abbot.