



**Janardan Bhagat Shikshan Prasarak Sanstha's**  
**CHANGU KANA THAKUR**  
**ARTS, COMMERCE & SCIENCE COLLEGE,**  
**NEW PANVEL**  
**(AUTONOMOUS)**

**Re-accredited 'A+' Grade by NAAC**  
**'College with Potential for Excellence' Status Awarded by UGC**  
**'Best College Award' by University of Mumbai**

**Program: B.A.**

**Revised Syllabus of S.Y.B. A. Geography**  
**Paper No. II and III**  
**for**  
**Semester III and IV**  
**Choice Based Credit & Grading System (75:25)**  
**w.e.f. Academic Year 2020-21**

**Details of the course:**

Sr. No.	Heading	Particulars
1	Title of Course	Geography
2	Eligibility for Admission	F.Y.B.A. of all recognised Universities
3	Passing marks	40%
4	Ordinances/Regulations (if any)	---
5	No. of Semesters	Two
6	Level	U.G.
7	Pattern	Semester (75:25)
8	Status	Revised
9	To be implemented from Academic year	2020-2021

**Preamble of the Syllabus:**

Bachelor of Arts (B.A.) in Geography is a under graduation course of Department of Geography, Changu Kana Thakur Arts, Commerce & Science college, New Panvel (Autonomous) The Choice Based Credit and Grading System to be implemented through this curriculum would allow students to develop a strong footing in the fundamentals and specialize in the disciplines of his/her liking and abilities. This syllabus is prepared to give the sound knowledge and understanding of Geography to undergraduate students at second year of the B.A. degree course. The syllabus is prepared to determine and analyse knowledge of the facts, processes, and methods of Geography. The content of syllabus will expose the students to various emerging new areas of Geography and acquaint them with their prevalent in their future studies and their applications in society. Through this course Students will acquire geographic analytical skills that can be applied to a variety of research and professional tasks where the analysis of spatial information is required.

**TITLE OF THE PAPERS:**

**S. Y. B. A. Geography (Paper No. II & III)**

For the subject of Geography there shall be two papers for 45 lectures each comprising of five units of 9 lectures each.

**Semester-III:**

**Paper-II: An Introduction to Climatology**  
**Course Code: UAR3GE2, Credit – 3**

**Paper-III: Physical Geography of India**  
**Course Code: UAR3GE3, Credit - 3**

**Semester-IV:**

**Paper-II: Introduction to Oceanography**  
**Course Code: UAR4GE2, Credit - 3**

**Paper-III: Agriculture Geography of India**  
**Course Code: UAR4GE3, Credit – 3**

## **COURSE OBJECTIVES AND OUCOMES:**

### **Semester: - III - S.Y.B.A. Geography** **Revised Syllabus w.e.f. Academic Year, 2020-21 (CBSGS)**

#### **PAPER NO. II - AN INTRODUCTION TO CLIMATOLOGY (UAR3GE2)**

##### **Course Objectives:**

1. To determine and analyse knowledge of the facts, processes, and branches of Climatology
2. To study the components of air pressure and atmospheric circulation.
3. To learn the concept and process of humidity and precipitation.
4. To understand the concept of climate and changing weather phenomena.
5. To develop basic skills in practical Geography and its applications in climatological study.

##### **Course Outcomes:**

By the end of the course, a student should develop the ability to:

1. Understand the introduction to Climatology considering weather & climate, nature, scope, and some other sub division of the course.
2. Understand weather phenomena winds, humidity, precipitation and winds.
3. Understand the process, methods of weather forecasting and climatic changes.
4. Learn the climatic changes, its causes, effects and its measures.
4. Able to read and interpret the weather map and to construct the various graphs related to climatology.

#### **PAPER NO. III – PHYSICAL GEOGRAPHY OF INDIA (UAR3GE3)**

##### **Course Objectives:**

1. To understand the extent and significance of India's location.
2. To study the physiography and the drainage pattern of India.
3. To expose the students to various facts and processes about climate, soil and natural vegetation of India.
4. To cultivate a sense of awareness among students and the public on the need to conserve our environment.
5. To acquaint the students about the mineral and power resources in India.
6. To develop basic skills in practical Geography and its applications.

##### **Course Outcomes:**

By the end of the course, a student should develop the ability to:

1. Understand importance of the location and the geographical personality of India.
2. Understand the variability of drainage pattern and climate in India.
3. Study the soil and forest resources, problems related to its depletion and conservation methods.
4. Study the minerals and energy resources in India.
5. Show the geographical features in the map of India.
6. Read, convert and prepare the map scale.

**Semester: - IV - S.Y.B.A. Geography**  
**Revised Syllabus w.e.f. Academic Year, 2020-21 (CBSGS)**

**PAPER NO. II - AN INTRODUCTION TO OCEANOGRAPHY (UAR4GE2)**

**Course Objectives:**

1. To study the origin development and branches of oceanography.
2. To understand the structure and composition of ocean water and bottom relief of ocean floor.
3. To learn the formation, types and effects of tides and ocean currents.
4. To understand and learn the relationship of man and ocean.
5. To develop basic skills in practical Geography and its applications in oceanographic study.

**Course Outcomes:**

By the end of the course, a student should develop the ability to:

1. Understand the origin, development and branches of oceanography.
2. To learn the importance and physical structure and composition of ocean water and relief.
3. Knowledge about the formation, types and effect of tides and ocean currents.
4. Understand the relationship between man and ocean.
5. Read and interpret the bathymetrical maps.

**PAPER NO. III – AGRICULTURE GEOGRAPHY OF INDIA (UAR4GE3)**

**Course Objectives:**

1. To study the definitions, nature scope and approaches of agriculture geography.
2. To understand the salient features of Indian agriculture and its importance in Indian economy.
3. To study types of farming, major crops, agro climatic zones and problems of agriculture in India.
4. To learn the concept, components and impacts of green revolution in India.
5. To study the sustainable agriculture and watershed management in India.
6. To understand the recent trends and use of technology in agriculture.
7. To learn the reading and interpretation the thematic maps and draw the statistical diagrams and graphs.

**Course Outcomes:**

By the end of the course, a student should develop the ability to:

1. Understand the introduction to agriculture, nature, scope, significance and approaches of agriculture geography.
2. Understand features, determinants, major crops and problems of Indian agriculture
3. Understand the history, components and impacts of green revolution in India.
4. Understand the development of recent trends and technology used in agriculture in India.
5. Interpret the thematic maps and draw the statistical diagrams and graphs.

**SCHEME OF EXAMINATION FOR EACH SEMESTER:**

**\*Internal Evaluation: 25 Marks**

(20 marks for internal test and 05 marks for overall performance)

<b>Duration: 40 Minutes</b>		<b>Marks: 20</b>
<b>N.B.</b> 1. All questions are compulsory and carry equal marks.		
<b>Q. 1</b>	<b>A) Fill in the blanks /Choose the correct alternatives/ Match the pairs</b>	<b>05 Marks</b>
	<b>B) Define the terms/ Answer in one sentence</b>	<b>05 Marks</b>
<b>Q.2</b>	<b>Answer the following (Any Two out of three)</b>	<b>10 Marks</b>

**\*\*Semester End Examination: 75 Marks**

**Question Paper Pattern**

**University of Mumbai**

**Changu Kana Thakur A.C.S. College, New Panvel (Autonomous)**

**Revised Syllabus w.e.f. Academic Year, 2019-20 (CBSGS)**

**S.Y.B.A. Geography, Semester- III and IV**

<b>Duration: 2½ hours</b>		<b>Marks: 75</b>
<b>N.B.</b> 1. All questions are compulsory and carry equal marks. 2. Use of Map Stencils and simple Calculator is allowed. 3. Attach appendix along with answer paper.		
<b>Q. 1</b>	<b>Unit-I</b>	<b>15 Marks</b>
<i>OR</i>		
<b>Q.1</b>	<b>Unit-I</b> <b>(Question may be divided in to A and B)</b>	<b>15 Marks</b>
<b>Q. 2</b>	<b>Unit-II</b>	<b>15 Marks</b>
<i>OR</i>		
<b>Q. 2</b>	<b>Unit-II</b> <b>(Question may be divided in to A and B)</b>	<b>15 Marks</b>
<b>Q. 3</b>	<b>Unit-III</b>	<b>15 Marks</b>
<i>OR</i>		
<b>Q. 3</b>	<b>Unit-III</b> <b>(Question may be divided in to A and B)</b>	<b>15 Marks</b>
<b>Q. 4</b>	<b>Unit-IV</b>	<b>15 Marks</b>
<i>OR</i>		
<b>Q. 4</b>	<b>Unit-IV</b> <b>(Question may be divided in to A and B)</b>	<b>15 Marks</b>
<b>Q. 5</b>	<b>Unit – V</b> <b>Practical Component (Any Two)</b> A) B)	<b>15 marks</b>

**SYLLABUS FOR SEMESTER III :****Paper: II**

**University of Mumbai**  
**Changu Kana Thakur A.C.S. College, New Panvel (Autonomous)**  
**Revised Syllabus w.e.f. Academic Year, 2020-21 (CBSGS)**  
**S.Y.B.A. Geography, Semester- III**  
**Paper-II: An Introduction to**  
**Climatology**  
**COURSE CODE: UAR3GE2, Credit - 3**

<b>Unit-I: Introduction to Climatology</b>		<b>09 (lectures)</b>
1.1	Definition, nature, scope and branches of climatology	
1.2	Concept and elements of weather and climate	
1.3	Composition and structure of atmosphere	
1.4	Insolation: Vertical and horizontal distribution of temperature	
<b>Unit-II : Air Pressure and Atmospheric Circulation</b>		<b>09 (lectures)</b>
2.1	Air pressure: Concept, types and influencing factors	
2.2	Horizontal distribution of air pressure	
2.3	Wind: Types of winds: Global, regional and local	
2.4	Upper air circulation ( Jet stream): Concept, origin and effects	
<b>Unit-III: Humidity and Precipitation</b>		<b>09 (lectures)</b>
3.1	Humidity: Types - absolute, relative and specific	
3.2	Condensation and its forms	
3.3	Precipitation and its types	
3.4	Spatial distribution of rainfall	
<b>Unit-IV: Climate and Weather Phenomena</b>		<b>09 (lectures)</b>
4.1	Cyclones: tropical and temperate	
4.2	Anti-cyclones and tornados	
4.3	El Nino and Indian monsoon	
4.4	Climate change: Global warming, causes effects and measures	
<b>Unit-V: Practical Component</b>		<b>09 (lectures)</b>
5.1	IMD: Weather signs and symbols, Reading and interpretation of IMD weather maps	
5.2	Construction of Wind rose, Climograph and Hythergraph	

**Reference Books:-**

1. Ahrens, C.D. (2012): Essentials of Meteorology: An Invitation to the Atmosphere; Cengage Learning, Boston
2. Ahrens, C.D., Jackson, P.L., Jackson, C.E.J. and Jackson, C.E.O. (2012): Meteorology Today: An Introduction to Weather, Climate and the Environment; Cengage Learning; Boston
3. Barry, R.G. and Chorley, R.J. (2003): Atmosphere, Weather and Climate; Psychology Press, Hove; East Sussex.
4. Chawan S.V. (ed) (2015): Physical Geography, Paper I, Published by Director (I/C), Institute of Distance and Open Learning, University of Mumbai.
5. Critchfield, H.J., (1975): general Climatology, Prentice Hall, New Jersey.
6. Lal D.S. (1997): Climatology; Sharda Pustak Bhavan; Allahabad
7. Lydolph, P.E.( 1985): The Climate of the Earth, Rowman Nad Allanheld, Totowa, New Jersey.
8. Mather,J.R.(1974): Climatology: Fundamentals and Applications; Mc Craw Hill Book Co., U.S.A.
9. Matthews, W. H., Kellogg, W., Robinson, G.D. (1971): Man's Impact on Climate; M.I.T. Press Design Dept. U.S.A.
10. Oliver, J.E. (1993): Climatology: An Atmospheric Science, Pearson Education India, New Delhi
11. Rosenberg, N.J., Blad, B.L., Verma, S.B.(1983): Micro-climate Biological Environment; John Wiley & Sons, U.S.A.
12. Rumney, G.R. (1968): Climatology and the World Climates, Macmillan, London.
13. Shinde P. ; Pednekar H. et.al. (2010): Introduction to Geography, Sheth Publishers Pvt.Ltd., Mumbai.
14. Subrahmanyam, V.P. (ed) (1983): Contributions to Indian Geography a) Vol III- General Climatology, b) Volume IV- Applied Climatology. Heritage Publishers, New Delhi.
15. Trewartha, G.T. (1980): An Introduction to Climate; McGraw Hill, New York, 5<sup>th</sup> edition, (International Student Edition)



**Paper: III**

**University of Mumbai**  
**Changu Kana Thakur A.C.S. College, New Panvel (Autonomous)**  
**Revised Syllabus w.e.f. Academic Year, 2020-21 (CBSGS)**  
**S.Y.B.A. Geography - Semester- III**  
**Paper-III: Physical Geography of**  
**India**  
**COURSE CODE: UAR3GE3, Credit - 3**

<b>Unit-I: Introduction of India</b>		<b>09 (lectures)</b>
1.1	India: Location , extent and significance India: Major physiographic divisions	
1.2	Mountainous region of India	
1.3	North Indian plains	
1.4	Peninsular plateau of India	
1.5	Coastal plains and islands of India	
<b>Unit-II: Drainage System</b>		<b>09 (lectures)</b>
2.1	Drainage System: Concept and types	
2.2	Himalayan rivers of India	
2.3	Peninsular Rivers of India	
2.4	Lakes of India	
<b>Unit-III: Climate, Soils and Natural Vegetation</b>		<b>09 (lectures)</b>
3.1	Seasons in India	
3.2	Soils of India: Importance, types and formation	
3.3	Forest in India: Importance and classification	
3.4	Conservation of soil and forest in India	
<b>Unit-IV: Mineral and Energy Resources</b>		<b>09 (lectures)</b>
4.1	Ferrous minerals in India: Types and distribution (Iron ore, manganese, bauxite and other important minerals)	
4.2	Nonferrous minerals in India: Types and distribution (Mica, limestone, gypsum, clay and other important minerals)	
4.3	Energy resources in India: Types and distribution (Coal, mineral oil and natural gas and other important resources)	
4.4	Power Resources in India: Types and distribution (Hydro, wind, solar, tidal and other important resources)	
<b>Unit-V: Practical Component</b>		<b>09 (lectures)</b>
5.1	Map filling: Showing geographical features in the Map of India (Related to above units)	
5.2	Map Scale – Types, Conversion and drawing	

**Reference books:-**

1. Deshpande C.D. (1992): India: A Regional Interpretation, Northern Book Centre, New Delhi.
2. Bharucha, F.R. (1983): A text book of the plant geography of India, Oxford Unievrstity Press, Bombay.
3. Dikshit, K.R.(1991): Environment, Forest Ecology and man in the Western Ghats- The Case of Mahabaleshwar Plateau, Rawat Publications, New Delhi.
4. Forest Survey of India: State Forests Reports, Dehradun.
5. Khullar, D.R. (2014): India: A Comprehensive Geography; Kalyani Publishers
6. Miller, R.W. et al. (1995): Soil in Our Environment, Prentice hall, U.S.A.
7. Raychudhari, S.P.(1958): Soils of India, ICAR, New Delhi
8. Robinson, F (ed.) (1989): The Cambridge Encyclopedia of India, Pakistan, Bangla desh and Sri Lanka,Cambridge University Press.
9. Savindra Singh (2006) : Physical Geography of India ; Pravalika Publications, Allahabad.
10. Sharma T.C. ( 2013) Economic Geography of India; Rawat Publications, New Delhi.
11. 15. परमार राजेंद्र (२०१६): “भारताचा प्राकृतिक भूगोल” हिमालया पब्लिशिंग हाऊस, मुंबई
12. 16. घारपुरे विठ्ठल (२०१४): “भारताचा भूगोल पिंपळापुरे आणि पुब्लिशर्स, नागपूर
13. 17. पेडणेकर, नारखेडे व इतर (२०१७) “भारताचा प्राकृतिक भूगोल” शेठ पब्लिशर्स प्रायवेट लिमिटेड, मुंबई

**SYLLABUS FOR SEMESTER IV :****Paper: II**

**University of Mumbai**  
**Changu Kana Thakur A.C.S. College, New Panvel (Autonomous)**  
**Revised Syllabus w.e.f. Academic Year, 2020-21 (CBSGS)**  
**S.Y.B.A. Geography, Semester- IV**  
**Paper-II: Introduction to**  
**Oceanography**  
**COURSE CODE: UAR4GE2, Credit - 3**

<b>Unit-I: Nature of Oceanography</b>		<b>09 (lectures)</b>
1.1	Origin and Development of Oceanography	
1.2	Oceanography : Concept, nature and scope	
1.3	Branches of oceanography	
1.4	Oceans and its characteristic	
<b>Unit-II: Bottom Relief and Ocean</b>		<b>09 (lectures)</b>
2.1	Structure of bottom relief of ocean floor	
2.2	Composition of ocean water	
2.3	Ocean water temperature: Factors and distribution	
2.4	Salinity of ocean water: Factors and distribution	
<b>Unit-III: Movements of Ocean Water</b>		<b>09 (lectures)</b>
3.1	Waves- Formation and types	
3.2	Tsunami and their effects on coast	
3.3	Concept and types of Tides	
3.4	Ocean Currents – types, distribution and effects of ocean currents	
<b>Unit-IV: Man and Ocean</b>		<b>09 (lectures)</b>
4.1	El- Niño and La-Niña phenomenon	
4.2	Coral reefs and their importance	
4.3	Marine Ecosystem: Types and characteristics	
4.4	Marine pollution: Causes, effects and measures	
<b>Unit-V: Practical Component</b>		<b>09 (lectures)</b>
5.1	Map filling : Related to Oceanography	
5.2	Reading and Interpretation of navigation charts and bathymetric maps	

**Reference books:-**

1. Bhatt, J.J. (1978): Exploring the Planet Ocean, D.Von Nostrand Co.New York.
2. Birla Economic Research Foundation, economic Research Division (1992):  
The Oceans, Allied Publishers Ltd. New Delhi.
3. Chandra, S. and Others (eds).(1993): The Indian Ocean and its islands:  
Strategic Scientific and Historical perspectives, sage Publications,  
New Delhi.
4. Chawan S.V. (ed) (2015): Physical Geography, Paper I, Published by Director  
(I/C), Institute of Distance and Open Learning, University of  
Mumbai.
5. Fairbridge, R.W.ed) Encyclopaedia of Oceanography, Reinholt, New York.
6. Sharma, R.C. (ed)(1985): The Oceans: realities and Prospects, Rajesh Publications,  
New Delhi.
7. Sengupta,R. and Desa E,(eds) (2001): The Indian Ocean: A Perspective Vol.,I and II  
Oxford and IBH Publishing Company Private Limited, New Delhi.
8. Paul, P.R.(1998): Invitation to Oceanography, Jones and Bartlett Publishing,  
Sudbury, Massachusetts.
9. Rajgopalan, R (ed) (1996): Voices for Oceans, A Report to the Independent  
World Commission on the Oceans, International Ocean Institute,  
Operational centre, Madras, India.
10. Qasim, S.Z(1998): Glimpses of Indian Ocean, Universities Press(India) Limited,  
Hyderabad.

**Paper: III**

**University of Mumbai**  
**Changu Kana Thakur A.C.S. College, New Panvel (Autonomous)**  
**Revised Syllabus w.e.f. Academic Year, 2020-21 (CBSGS)**  
**S.Y.B.A. Geography, Semester- IV**  
**Paper-III: Agriculture Geography of India**  
**COURSE CODE: UAR4GE3, Credit - 3**

<b>Unit-I: Introduction to Agricultural Geography</b>		<b>09 (lectures)</b>
1.1	Definition, nature and scope of Agricultural Geography	
1.2	Approaches of Agriculture Geography	
1.3	Salient features of Indian agriculture	
1.4	Importance of agriculture in Indian economy	
<b>Unit-II: Introduction to Indian Agriculture</b>		<b>09 (lectures)</b>
2.1	Factors influencing agriculture in India	
2.2	Types of farming in India	
2.3	Major crops of India	
2.4	Agro- climatic regions of India	
2.5	Problems associated with Indian agriculture ( Natural, Socio-Economic and Political)	
<b>Unit-III: Green Revolution in India</b>		<b>09 (lectures)</b>
3.1	Green Revolution in India: Introduction and components	
3.2	Impacts of Green Revolution	
3.3	Sustainable agriculture in India	
3.4	Watershed management in India	
<b>Unit-IV: Recent Trends in Agriculture</b>		<b>09 (lectures)</b>
4.1	Livestock resources and white revolution	
4.2	Genetic engineering and tissue culture	
4.3	Horticulture and poly house agriculture	
4.4	Agro processing and agro exports in India	
4.5	Agro-tourism and Agro forestry	
<b>Unit- V: Practical Component</b>		<b>09 (lectures)</b>
5.1	Interpretation/ question- answer on thematic maps related to agriculture of India ( NATMO and other )	
5.2	Drawing of Statistical Diagrams and Graphs: Bar graphs, line graphs, and pie charts	

**Reference books:-**

1. Bansil, B. C. (1975): 'Agricultural Problems of India', Delhi.
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. Gregor, H.P.: Geography of Agriculture. Prentice Hall, New York, 1970.
5. Grigg, D. (1984): 'An Introduction to Agricultural Geography', Hutchinson Publication, London
6. Grigg, D.B.(1974) : The Agricultural Systems of the World. Cambridge University Press, New York.
7. Hartshorn, T.N. and Alexander, J.W. (1988): Economic Geography. Prentice Hall, New Delhi.
8. Morgan W.B. and Norton, R.J.C. (1971): Agricultural Geography. Methuen, London, .
9. Morgan, W. B. and Munton, R. J. C. (1977): 'Agricultural Geography' Methuen, London.
10. Morgan, W.B.(1978): Agriculture in the Third World - A Spatial Analysis. Westview Press, Boulde.
11. Sauer, C. O. (1952): 'Agricultural Origins and Dispersals', American Geographical Journal
12. Sauer, C.O.(1969): Agricultural Origins and Dispersals. M.I.T. Press, Mass, U.S.A.
13. Singh J.(1997): Agricultural Development in South Asia: A Comparative A Study in the Green Revolution Experiences, national Books Organization, New Delhi.
14. Singh, J. and Dhillon, S. S. (1984): 'Agricultural Geography', McGraw Hill, New Delhi.
15. Singh, J. and Dhillon, S.S. (1988), "Agricultural Geography", 2nd edition, Tata McGraw-Hill, NewDelhi
16. Symons, L. (1972): 'Agricultural Geography', Bell and Sons, London
17. Tarrant, J.R.(1974): Agricultural Geography, Problems in Modern Geography Series, John Wiley and Sons.
18. The Hindu ( 2006): Survey of Indian Agriculture 2006. New Delhi.
19. Wigley, G.(1981), Tropical Agriculture: The Development of Production, 4th edition, Arnold, London

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