



**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 F.Y.B. A. Geography**  
**Choice Based Credit & Grading System (75:25)**  
**w.e.f. Academic Year 2019-20**

**Details of the course:**

<b>Sr. No.</b>	<b>Heading</b>	<b>Particulars</b>
1	Title of Course	Geography
2	Eligibility for Admission	<sup>th</sup> 12 Arts/ Commerce/ Science of all recognised Board
3	Passing marks	35%
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	2019-2020

**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 first year of the B.A. degree course. The syllabus is prepared to determine and analyse knowledge of the facts, processes, and methods of Physical and Human 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.

**Objectives of the course:**

1. To determine and analyse knowledge of the facts, processes, and methods of Physical and Human Geography
2. To 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.
3. To develop basic skills in practical Geography and its applications in society.
4. To cultivate a sense of awareness among students and the public on the need to conserve our environment and to contribute in the efforts to make the environment clean, greener and a better place to live in.

**Outcome of the course:**

1. Students will demonstrate a proficiency in knowledge of essential concepts of Physical and Human geography including.
2. Students will demonstrate the ability to analyse, interpret, and draw conclusion about geographic problems and information.
3. Students will appreciate the relevance of geographical knowledge to everyday living.
4. 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:**

**F. Y. B. A. Geography (Paper No. I)**

For the subject of Geography there shall be two papers for 60 lectures each comprising of five units of 12 lectures each.

**Semester-I**

**Paper-I: Geomorphology**

**COURSE CODE: UAR1GE1 (2019-20), Credit - 4**

**Semester-II**

**Paper-I: Human Geography**

**COURSE CODE: UAR2GE1 (2019-20), Credit - 4**

**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)**

**F.Y.B.A. Geography, Semester- I and II**

<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 (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 (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 (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 (Question may be divided in to A and B)</b>	<b>15 Marks</b>
<b>Q. 5</b>	<b>Unit – V Practical Component (Any Two)</b> A) B) C) D)	<b>15 marks</b>

**Syllabus for Semester I :**

**University of Mumbai**  
**Changu Kana Thakur A.C.S. College, New Panvel (Autonomous)**  
**Revised Syllabus w.e.f. Academic Year, 2019-20 (CBSGS)**  
**F.Y.B.A. Geography, Semester- I**  
**Paper-I: Geomorphology**  
**COURSE CODE: UAR1GE1 (2019-20), Credit – 4**

<b>Unit-I: Interior of the Earth</b>		<b>12 (lectures)</b>
1.1	Definition nature and scope of Geomorphology	
1.2	Composition and structure of the interior of the earth	
1.3	Lithological cycle	
1.4	Rocks and minerals	
<b>Unit-II: Endogenic Processes</b>		<b>12 (lectures)</b>
2.1	Movements of the earth's crust: Diastrophic and catastrophic movements	
2.2	Diastrophic movements: Uplift and subsidence, folding and faulting	
2.3	Catastrophic movements: Volcanoes and earthquakes: Examples from the World and India	
<b>Unit-III: Exogenic Processes– I</b>		<b>12 (lectures)</b>
3.1	Weathering: Concept and types	
3.2	Erosion and mass wasting:	
3.3	Fluvial landforms: Erosional and depositional	
3.4	Glacial landforms: Erosional and depositional	
<b>Unit-IV: Exogenic Processes – II</b>		<b>12 (lectures)</b>
4.1	Aeolian landforms: Erosional and depositional	
4.2	Coastal landforms: Erosional and depositional	
4.3	Karst landforms: Erosional and depositional	
<b>Unit-V: Practical Component</b>		<b>12 (lectures)</b>
5.1	Identification of contours	
5.2	Types of slope	
5.3	Calculation of gradient	
5.4	Drawing of sections to depict contour landforms –Intervisibility	

**Reference Books:**

1. Singh, Savindra (2015): “Physical Geography”, Pravalika Publications, Allahabad
2. Bunnett, R. B. (1965): “Physical Geography in Diagrams”, Parson Education, New Delhi
3. Lal, D. S. (2009): “Physical Geography”, Sharada Pustak Bhavan, Allahabad
4. Qazi, S. A. (2009): “Principles of Physical Geography”, APH Publishing Corporation, New Delhi
5. Negi, B. S. (1993): “Physical Geography”, S. J. Publications, Meerut
6. Strahler, A. H. and Strahler, A. N. (1992): “Modern Physical Geography”, John Willey & Sons, INC, New York
7. Hussain, Majid (2001): “Fundamentals of Physical Geography”, Rawat Publications, Jaipur
8. Dayal, P. (2010): “A Text Book of Geomorphology”, Rajesh Publications, New Delhi
9. Thornbury, W. (1993): “Principles of Geomorphology”, Wiley Esatern Limited, New Delhi
10. Sparks B. W. (1988): “An Introduction to Geomorphology”, Longman, London
11. Mishra, B. (2008): “Interpreting Contours and Topographical Maps”, Frank Bros. and Co., New Delhi
13. Singh, L. R. (2009): “Fundamentals of Practical Geography”, Sharda Pustak Bhavna, Allahabad
14. Mishra, R. P. and Ramesh, A. (2002): “Fundamentals of Cartography”, Concept Publishing Company, New Delhi
15. परमधर रावेंडे (२०१६): “भूगोपशास्त्र” त्रिमासिक पत्रिका पत्रिका, मुंबई
16. घाटसर्, त्रिभुवन (२०१४): “भूगोपशास्त्र” प्रकाशनालय आर्य समाज, नगर
17. पेंडसे, नारायण वि. इतर (२०१७) “भूगोपशास्त्र वि. मासिक भूगोपशास्त्र पत्रिका, मुंबई

**Syllabus for Semester II :**

**University of Mumbai**  
**Changu Kana Thakur A.C.S. College, New Panvel (Autonomous)**  
**Revised Syllabus w.e.f. Academic Year, 2019-20 (CBSGS)**  
**F.Y.B.A. Geography, Semester- II**  
**Paper-I: Human Geography**  
**COURSE CODE: UAR2GE1 (2019-20), Credit – 4**

<b>Unit-I: Introduction to Human Geography</b>		<b>12 (lectures)</b>
1.1	Meaning, nature and scope of Human Geography	
1.2	Branches of Human Geography	
1.3	Different approaches to Human Geography	
1.4	Man-environment relationship: Determinism, Possibilism, Probabilism	
<b>Unit-II: Settlements</b>		<b>12 (lectures)</b>
2.1	Concept of rural settlements: Types,	
2.2	Site and situation and patterns of rural settlements	
2.3	Concept of urban settlement: Types, site and situation	
2.4	Functional classification of urban settlements	
<b>Unit-III: Population</b>		<b>12 (lectures)</b>
3.1	Growth and distribution of World population	
3.2	Factors of population growth in the World	
3.3	Determinants of population distribution in the World	
3.4	Concept and problems of under-population, over-population and optimum population (World examples)	
<b>Unit-IV: Migration</b>		<b>12 (lectures)</b>
4.1	Concept and types of migration	
4.2	Causes of migration: Push and pull factors	
4.3	Consequences of migration: Source and destination areas	
4.4	Recent Trends in International Migration	
<b>Unit-V: Practical Component</b>		<b>12 (lectures)</b>
5.1	Nearest neighbour analysis	
5.2	Construction and interpretation of line graphs (population growth)	
5.3	Trend in growth rate of population with interpretation	
5.4	Construction and interpretation of flow diagrams	

**Reference Books:**

1. Johnson R. J. & Others (1983) : The Disctionary of Human Geography, Blackwell England
2. Singh, L. R. (2009): “Fundamentals of Human Geography”, Sharda Pustak Bhavan, Allahabad
3. Hussain, M. (2011): “Human Geography”, Rawat Publications, Jaipur
4. Dikshit, R. D. (1997): “Geographical Thought: A Contextual History of Ideas”, PHI Learning Private Limited, Delhi
5. Singh, R. Y. (2002): “Geography of Settlements”, Rawat Publications, Jaipur
6. Siddhartha, K. and Mukherjee, S. (2016): “Cities, Urbanisation and Urban Systems”, Kitab Mahal, Delhi
7. Chandna, R. C. (2016): “Geography of Population: Concepts, Determinants and Patterns”, Kalyani Publishers, Ludhiana
8. Bhende, A. and Kanitkat, T. (2015): “Principles of Population Studies”, Himalaya Publishing House, Mumbai
9. Koser, K. (2007): “International Migration: A Very Short Introduction”, Oxford University Press, UK
10. Castles, S., Haas, H., and Miller, M. (2013): “The Age of Migration: International Movements in the Modern World”, Guilford Pr.
11. Leong, G. C. and Morgan, G. C. (1982): “Human and Economic Geography”, Oxford University Press, Delhi
12. Knowles, R. and Wareing, J. (2012): “Economic and Social Geography”, Rupa and CO., Kolkata
13. Waugh, D. (2009): “The New Wider World”, Oxford University World, Oxford
14. Mahmood, A. (2008): Statistical Methods in Geographical Studies”, Rajesh Publications, New Delhi
15. Singh, L. R. (2009): “Fundamentals of Practical Geography”, Sharda Pustak Bhavna, Allahabad
16. Mishra, R. P. and Ramesh, A. (2002): “Fundamentals of Cartography”, Concept Publishing Company, New Delhi
16. पेठिकेर, परमेश्वर ि इतर (२०१६) “मानसिी भूगोल” श्रेठ पहललशस ापिट हलहमटड, मडई
17. पठारसुर, वीशुल (२०००): मानसिी भूगोल’ शपपळणसुर आहणि वृललीशसस नणणसुर
18. पेठिकेर, नणरसुठे ि इतर (२०१७) “सुरसुपशण ि मानसिी भूगोल’ श्रेठ पहललशस ापिट हलहमटड, मडई

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**'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> (Question may be divided in to A and 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> (Question may be divided in to A and 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> (Question may be divided in to A and 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> (Question may be divided in to A and 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” हिमाचल प्रदेश पब्लिशिंग हाउस, मॉंबई
12. 16. घाणसे वल्लभ (२०१४): भूगोल लापर आणि पलरलीकसस नागप “भारताचा भूगोल”
13. 17. पेंडसेकर, नारखेडे व इतर (२०१७) “भारताचा प्राकृतिक भूगोल” वेंठ पब्लिशिंगस प्रायलेट शरशमटेडे, मॉंबई

**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. 91978): Exploring the Planet Ocean, D.Von Nostrand Co.New York.
2. Birla Economic Research Foundation, economic Research Division 91992):  
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) Encycloepadia 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
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8. Morgan W.B. and Norton, R.J.C. (1971): Agricultural Geography. Mathuen, 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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II विद्या विनयेन शोभते II

**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 T.Y.B. A. Geography**  
**Paper No. IV to IX**  
**for**  
**Semester V and VI**  
**Choice Based Credit & Grading System (75:25)**  
**w.e.f. Academic Year 2021-22**

**Details of the course:**

Sr. No.	Heading	Particulars
1	Title of Course	Geography
2	Eligibility for Admission	Second Year B.A
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	2021-2022

**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 first year of the B.A. degree course. The goal of the syllabus is to make the study of Geography as stimulating, interesting and relevant as possible. The syllabus is prepared by keeping in mind the aim to make students capable of studying Geography in academic and industrial courses. Also to expose the students and to develop interest in them in various fields of Geography. The new and updated syllabus is based on disciplinary approach with vigour and depth taking care of the syllabus is not heavy at the same time it is comparable to the syllabi of other universities at the same level. The students pursuing this course would have to develop understanding of various aspects of the Geography. The conceptual understanding, development of experimental skills, developing the aptitude for academic and professional skills, obtaining basic ideas and understanding of hyphenated techniques, understanding the fundamental Geographic processes and rationale towards application of Geographical knowledge are among such important aspects.



**Objectives of the course:**

1. To promote understanding of basic facts and concepts in Geography while retaining the excitement of Geography.
2. To make students capable of studying Geography in academic and Industrial courses.
3. To expose the students to various emerging new areas of Geography and apprise them with their prevalent in their future studies and their applications in various spheres of chemical sciences.
4. To develop problem solving skills in students.

**Outcome of the course:**

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

- To understand, coherently and effectively about various genres of Geography.
- To develop the understanding and interest in the field of Geography
- To develop basic skills in practical Geography and its industrial applications.

**Title of the Papers:****T. Y. B. A. Geography**

For the subject of Geography at third year level, there shall be six papers in each semester (Semester V and VI). Out of which for four papers are theory papers (Paper no. IV, V, VII and VIII) of 60 lectures each comprising of five units of 12 lectures. Paper No. VI and IX are Practical Component with 45 lectures each comprising of five units of 09 lectures.

**Title of Papers with Course Code and Credit:****Semester-V**

<b>Paper No.</b>	<b>Course Code</b>	<b>Title of the Papers</b>	<b>Credits</b>
Iv	<b>UAR5GE4</b>	Geography of Settlements	<b>04</b>
V	<b>UAR5GE5</b>	Geography of Maharashtra	<b>04</b>
Vi	<b>UAR5GE6</b>	Tools and Techniques in Geography For Spatial Analysis-I (Practical)	<b>03</b>
Vii	<b>UAR5GE7</b>	Regional Planning and Development	<b>04</b>
Viii	<b>UAR5GE8</b>	Geography of Resources	<b>04</b>
Ix	<b>UAR5GE9</b>	Geospatial Technology	<b>03</b>

**Semester-VI**

<b>Paper No.</b>	<b>Course Code</b>	<b>Title of the Papers</b>	<b>Credits</b>
IV	<b>UAR6GE4</b>	Environmental Geography	<b>04</b>
V	<b>UAR6GE5</b>	Geography of Tourism and Recreation	<b>04</b>
VI	<b>UAR6GE6</b>	Tools and Techniques in Geography For Spatial Analysis-II (Practical)	<b>03</b>
VII	<b>UAR6GE7</b>	Economic Geography	<b>04</b>
VIII	<b>UAR6GE8</b>	Social Geography	<b>04</b>
IX	<b>UAR6GE9</b>	Research Methodology in Geography	<b>03</b>

**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**  
**For Revised Syllabus w.e.f. Academic Year, 2021-22 (CBSGS)**  
**T.Y.B.A. Geography, Semester- V and VI**

<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>15 Marks</b>
<i>OR</i>		
<b>Q. 5</b>	<b>Unit-V</b> <b>(Question may be divided in to A and B)</b>	<b>15 Marks</b>

# Semester- V

Revised Syllabus w.e.f. Academic Year 2021-22 (CBSGS)

T.Y.B.A. Geography (Semester - V)

Paper: IV : GEOGRAPHY OF SETTLEMENT

COURSE CODE: UAR5GE4

Credit: 04

<b>UNIT – I: Introduction of Settlement Geography</b>		<b>No. of Lectures</b>
<b>1.1</b>	Settlement geography: definitions, nature and scope	<b>12</b>
<b>1.2</b>	Importance of settlement studies in Geography	
<b>1.3</b>	Factors influencing growth and distribution of settlements	
<b>1.4</b>	Settlement types, their characteristics and differences	
<b>UNIT – II: Geography of Rural Settlements</b>		<b>12</b>
<b>2.1</b>	Origin and growth of settlements - evolution of rural settlements	
<b>2.2</b>	Site and situation of rural settlements	
<b>2.3</b>	Classification of rural settlements on the basis of population and patterns	
<b>2.4</b>	Classification of rural settlements on the basis of spacing and functions	
<b>UNIT – III: Rural Settlements in India</b>		<b>12</b>
<b>3.1</b>	Spatial distribution and density of rural settlements in India	
<b>3.2</b>	Structure of house and building materials in India	
<b>3.3</b>	Regional variations in rural settlement patterns in India	
<b>3.4</b>	Morphology of rural settlement in India	
<b>UNIT – IV: Urban Settlements</b>		<b>12</b>
<b>4.1</b>	Origin and growth of urban settlements	
<b>4.2</b>	Classification of urban settlements on the basis of culture and functions	
<b>4.3</b>	Hierarchy of Urban Settlement: Rank Size Rule and Primate city	
<b>4.4</b>	Christaller's Central Place Theory and Mark Jefferson's Theory	
<b>UNIT – V: Urban Settlements in India</b>		<b>12</b>
<b>5.1</b>	Urbanization in India: Trends, patterns and types of towns based on Census	
<b>5.2</b>	Morphology of urban settlements in India (With reference to a port and inland city)	
<b>5.3</b>	Impact of urbanization on Indian cities	
<b>5.4</b>	Smart city: Concept, need and implementation in India	

**Outcome of the course:**

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

1. Understand the nature and scope of Settlement Geography and the characteristics of rural and urban settlements.
2. Understand the structure of house and building materials, regional variations of rural settlement in India.
3. Understand the history of world settlements and factors responsible for world settlements.
4. Understand the classification and morphology, pattern and nature and process of rural and urban settlements
5. Understand the process of urbanization, urban problems and smart cities in India.

**References:**

1. Deshpande, C. D. (2005): "Cities: A Geographical Study", Translated by V. G. Amrite, Manan Prakashan, Mumbai
2. Gharpure, V. (2013): "Nagari Bhugol", (Marathi) Pimpalpure and Company Publishers, Nagpur
3. Gharpure, V. (2013): "Vasti Bhugol", (Marathi) Pimpalpure and Company Publishers, Nagpur
4. Gharpure, V. (2017): "Manavi Bhugol", (Marathi) Pimpalpure and Company Publishers, Nagpur
5. Ghosh. S. (2015): "Introduction to Settlement Geography", Orient Blackswan Private Limited, Hyderabad
6. Jyptirmoy Sen (2007): "A Text Book of Social and Cultural Geography," Kalyani Publsiher, New Delhi.
7. Knowles, R and Wareing, J. (1996): "Economic and Social Geography", the Made Simple Series, Rupa & Co., Calcutta
8. Leong, Goh-Cheng and Morgan, G. (1994): "Human and Economic Geography", Oxford University Press, Oxford
9. Noble, A. (1998): "Using Descriptive Models to Understand South Asian Cities", *Education About Asia*, Vol. 3, No. 3, Downloaded from <http://aas2.asian-studies.org/EAA/EAA-Archives/3/3/205.pdf>
10. Siddhartha, K and Mukherjee, S. (2016): "Cities, Urbanisation and Urban Systems (Settlement Geography)", KitabMahal, Allahabad
11. Singh, L. R. (2009): "Fundamentals of Human Geography", Sharda Pustak Bhawan, Allahabad
12. Singh, R. Y. (2012): "Geography of Settlements", Rawat Publications, Jaipur
13. Tiwari, R. C. (2016): "Geography of India", Pravalika Publications, Allahabad
14. Thakur S. A. and others – "Settlement Geography"/ *Vasti Bhugol*- Konkan Geographers, Publication (2012)
15. चारपुरे विठ्ठल (१९९९) वस्ती भूगोल, पिंपळापुरे आणि कंपनी, नागपूर
16. सावंत प्रकाश (१९९८) नागरी भूगोल, फडके प्रकाशन, कोल्हापूर.

## Revised Syllabus w.e.f. Academic Year 2021-22 (CBSGS)

## T.Y.B.A. Geography (Semester - V)

## Paper: V-A: GEOGRAPHY OF MAHARASHTRA

COURSE CODE: UAR5GE5

Credit: 04

<b>Unit-I: Maharashtra: Geographical Setting</b>		<b>No. of Lectures</b>
1.1	Location, extent and boundaries	<b>12</b>
1.2	Administrative setup and divisions	
1.3	Physiography and climate	
1.4	Drainage system	
<b>Unit-II: Natural Resources</b>		<b>12</b>
2.1	Soils	
2.2	Natural vegetation	
2.3	Minerals	
2.4	Energy resources	
<b>Unit-III: Human Resources</b>		<b>12</b>
3.1	Population growth	
3.2	Distribution –urban-rural and population density	
3.3	Structure of population : Age-sex, literacy and dependency Ratio	
3.4	Occupational structure of population	
<b>Unit-IV: Agriculture, Fishing and Livestock Resources</b>		<b>12</b>
4.1	Salient features of agriculture	
4.2	Agricultural regions, recent issues and policies	
4.3	Fisheries, recent issues and policies	
4.4	Livestock resources recent issues and policies	
<b>Unit-V: Industries, Trade and Transport</b>		<b>12</b>
5.1	Basis of Industrialization and Major industrial regions	
5.2	Industrial issues and policies	
5.3	Transport Development in Maharashtra	
5.4	Trade in Maharashtra	

**Outcome of the course:**

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

1. Understand the location, administrative setup and geographical personality of Maharashtra
2. Understand the drainage and climate in Maharashtra
3. Understand the natural and human resources of Maharashtra
4. Understand the agriculture, fishing and livestock resources in Maharashtra.
5. Understand the growth and development of industries, trade and transport in Maharashtra

**References:**

1. Jaymala Diddee, S.R. Jog, V.S. Kale Geography of Maharashtra
2. Johns: Economic Geography -
3. Khullar: Geography of India
4. Majid Hussein: Geography of India
5. Oxford: Oxford School atlas-
6. Savinder Singh Environmental Geography
7. Sharma: India's economic and commercial geography
8. सवदी ए.बी. महाराष्ट्राचा भूगोल
9. महाराष्ट्राचा भूगोल, प्रा.सी.डी देशपांडे
10. महाराष्ट्र (२००६) संतोष दास्ताने
11. जनगणना अँटर्स – महाराष्ट्र सरकार
12. महाराष्ट्रातील जलसांपदा- प्रा. डॉ. एस.व्ही.ढमढेरे
13. महाराष्ट्रातील नद्या – श्रीकांत तापीकर

**Revised Syllabus w.e.f. Academic Year 2021-22 (CBSGS)****T.Y.B.A. Geography (Semester - V)****Paper: V-B : POPULATION GEOGRAPHY****COURSE CODE: UAR5GE5****Credit: 04**

<b>UNIT- I: Introduction to Population Geography</b>		<b>No. of Lectures</b>
<b>1.1</b>	Concept, definition, nature, scope, importance	<b>12</b>
<b>1.2</b>	Evolution and recent trends	
<b>1.3</b>	Basic sources of population data and their important elements	
<b>1.4</b>	Population Geography and other Social Sciences	
<b>UNIT- II: Population Dynamics</b>		<b>12</b>
<b>2.1</b>	Population growth in the world (continent wise and level of development)	
<b>2.2</b>	Population growth in India	
<b>2.3</b>	World : Population density and its determinants	
<b>2.4</b>	Structure of population in developed and developing world (Age and Sex, Rural and Urban)	
<b>UNIT- III: Theories of Population Growth</b>		<b>12</b>
<b>3.1</b>	Demographic Transition Model	
<b>3.2</b>	Malthu's Population Theory	
<b>3.3</b>	Leibenstein's motivational theory of population growth	
<b>3.4</b>	Theory of optimum population	
<b>UNIT- IV: Migration</b>		<b>12</b>
<b>4.1</b>	Definition and Classification of Migration	
<b>4.2</b>	Causes and Consequences of Migration	
<b>4.3</b>	Recent trend of migration in India	
<b>4.4</b>	Issues of infiltration and its impacts in India	
<b>UNIT- V: Contemporary Issues</b>		<b>12</b>
<b>5.1</b>	Ageing population	
<b>5.2</b>	Gender issues -declining sex ratio, literacy gap,	
<b>5.3</b>	Poverty and unemployment in India	
<b>5.4</b>	Rapid urbanization in India	



**Outcome of the course:**

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

1. Understand the nature, scope, importance and relation with other social sciences of Population Geography
2. Understand the structure, growth, density and distribution of population in India and World.
4. Get knowledge about population theories.
5. Understand the causes, consequences and recent trends of migration in India
6. Understand the contemporary issues of population in India.

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**Revised Syllabus w.e.f. Academic Year 2021-22 (CBSGS)**

**T.Y.B.A. Geography (Semester - V)**

**Paper No: VI: TOOLS AND TECHNIQUES IN GEOGRAPHY FOR SPATIAL ANALYSIS-I (Practical)**

**COURSE CODE: UAR5GE6**

**Credit: 03**

<b>Unit –I: Map Projections</b>		<b>No. of Lectures</b>
<b>1.1</b>	Basic Concepts – Definition, scale, direction, azimuth, graticule, great circle, true meridian, types of projections, choice of projections	<b>09</b>
<b>1.2</b>	Zenithal Polar Projections – Equal Area, Equidistant	
<b>1.3</b>	Cylindrical Projections - Equal Area, Equidistant	
<b>1.4</b>	Conical Projections - One standard parallel, two standard parallel	
<b>Unit-II: Elements of Map</b>		<b>09</b>
<b>2.1</b>	Basic elements of map and identification of relief, bearing and distance	
<b>2.2</b>	Area calculation with square method, strip method and triangulation method	
<b>2.3</b>	Delineation of watershed on topo sheet and preparation of drainage map	
<b>2.4</b>	Longitudinal profile of river	
<b>Unit-III: Survey of India Toposheets</b>		<b>09</b>
<b>3.1</b>	Introduction and indexing of SOI Topo sheets, Signs and symbols and marginal information	
<b>3.2</b>	Study of physiography, drainage and vegetation (one full topo sheet of hilly and plateau region each)	
<b>3.3</b>	Study of settlements – size, pattern, utilities (one full topo sheet of plains and urban region each)	
<b>3.4</b>	Study of transport and communication network and economic activities (one full topo sheet of plains and urban area each)	
<b>Unit IV: Preparation of Thematic maps (Conventional method)</b>		<b>09</b>
<b>4.1</b>	Preparation of thematic maps with actual data- Dot and Pictogram	
<b>4.2</b>	Preparation of thematic maps with actual data- Choropleth and Isopleth	
<b>4.3</b>	Preparation of thematic maps with actual data- Located bar, located circle and pie chart	
<b>Unit-V: Use of computers in geographical data representation</b>		<b>09</b>
<b>5.1</b>	Use of MS Word and MS Power Point in Geography	
<b>5.2</b>	Construction of line graphs & simple, multiple bar graphs, divided bar graphs, and pie charts using MS-excel	
<b>5.3</b>	Preparation of datasheet in SPSS	
<b>5.4</b>	Calculation of central tendency and standard deviation using SPSS	

**Outcome of the course:**

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

1. Understand the basic concept and types map projections.
2. Understand the Basic elements of map and able to area calculation.
3. Able to read and interpret of topographical maps.
4. Able to use the computer with basic Microsoft and SPSS software's.
5. Able to prepare the thematic maps by using different techniques.

**References -**

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**Revised Syllabus w.e.f. Academic Year 2021-22 (CBSGS)****T.Y.B.A. Geography (Semester - V)****Paper: VII: REGIONAL PLANNING AND DEVELOPMENT****COURSE CODE: UAR5GE7****Credit: 04**

<b>UNIT – I: Understanding Regional Planning</b>		<b>No. of Lectures</b>
1.1	Planning: Concept, types and need	<b>12</b>
1.2	Regional planning: Concept, nature, relation with Geography	
1.3	Role of surveys and geospatial technology in regional planning	
1.4	Problems associated with regional planning	
<b>UNIT – II: Concept of Region in Planning</b>		<b>12</b>
2.1	Region: Concept, types and delineation	
2.2	Planning Regions: Need, characteristics and hierarchy	
2.3	Demarcation of planning regions: Principles, criteria and methods	
2.4	Perroux's Growth Pole Theory and regional planning	
<b>UNIT – III: Understanding Regional Development</b>		<b>12</b>
3.1	Development: Concept and indicators	
3.2	Regional disparities in development: Concept and measurements	
3.3	Spatial and Non-Spatial Models of Development with Special Reference to Rostow's Model and Myrdal's Model	
3.4	Strategies for regional development	
<b>UNIT – IV: Regional Planning in India – I</b>		<b>12</b>
4.1	Five-Year Plans: Features, achievements and failure	
4.2	Multi-level planning in India	
4.3	Planning regions of India	
4.4	Changing planning mechanism of India: NITI Ayog	
<b>UNIT – V: Regional Planning in India – II</b>		<b>12</b>
5.1	Micro level planning in rural area	
5.2	Backward area development programme	
5.3	Urban fringe of Indian cities: Problems and planning	
5.4	Metropolitan Planning: A Case of Mumbai Metropolitan Region	

**Outcome of the course:**

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

1. Understand the concept, nature and problems of Regional Planning
2. Gain knowledge about definition of region, evolution and types of regional planning.
3. Understand the concept, strategies and measurements of regional disparities and different models of regional development.
4. Understand the regional planning of India.

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**Books for further reading:**

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2. Datt, G. And Mahajan, A. (2016): "Datt and Sundaram's Indian Economy", S. Chand Publishing, New Delhi
3. Devi, Laxmi (2000): "Planning Development and Regional Disparities", (ed.) Anmol Publications, New Delhi
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10. Yojana, Monthly Journal Published in English and Marathi by Government of Maharashtra

**IMPORTANT WEBSITES / WEB LINKS:**

[mmrda.maharashtra.gov.in](http://mmrda.maharashtra.gov.in)  
[niti.gov.in](http://niti.gov.in)  
[planningcommission.gov.in](http://planningcommission.gov.in)  
[yojana.gov.in](http://yojana.gov.in)

**Revised Syllabus w.e.f. Academic Year 2021-22 (CBSGS)****T.Y.B.A. Geography (Semester - V)****Paper: VIII - A: GEOGRAPHY OF RESOURCES****COURSE CODE: UAR5GE8****Credit: 04**

<b>UNIT – I: Introduction to the Resources</b>		<b>No. of Lectures</b>
1.1	Meaning and importance of the natural resources	<b>12</b>
1.2	Factors influencing resource utilization	
1.3	Classification of resources	
1.4	Issues with renewable and non-renewable resources	
<b>UNIT – II: Need for Sustainable use of Natural resources</b>		<b>12</b>
2.1	Over exploitation and depletion of natural resources	
2.2	Resource consumption pattern in the developed, developing and less developed countries	
2.3	Need and measures for resource conservation	
2.4	Sustainable use of natural resources	
<b>UNIT – III: Natural Resources, Part –I</b>		<b>12</b>
3.1	Distribution of water resources on the Earth	
3.2	Water consumption pattern, water pollution and water conservation	
3.3	Distribution of forest resources in the world	
3.4	Depletion of forest and forest conservation	
<b>UNIT – IV: Natural Resources Part –II</b>		<b>12</b>
4.1	Soil composition and factor affecting pedogenesis processes	
4.2	Soil degradation and its conservation	
4.3	Minerals and their classification	
4.4	Utilization of energy minerals, issues and need conservation	
<b>UNIT – V: Human Resources</b>		<b>12</b>
5.1	Concept of human resource: skilled and unskilled workers	
5.2	Distribution of population in the world	
5.3	Concept of over, under and optimum population	
5.4	Population Resource regions	

**Outcome of the course:**

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

1. Understand the concept, factors, importance and classification of resources.
2. Know the over exploitation and conservation measures of natural resources.
3. Learn the importance, consumption, problems and Conservation methods of water, forest, soil and mineral resources.
4. Understand the concept and distribution of human resources.

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**Revised Syllabus w.e.f. Academic Year 2021-22 (CBSGS)****T.Y.B.A. Geography (Semester - V)****Paper: VIII-B : GEOGRAPHY OF HEALTH****COURSE CODE: UAR5GE8****Credit: 04**

<b>Unit I - Introduction to Geography of Health</b>		<b>No. of Lectures</b>
1.1	Nature, scope and evolution Geography of health	<b>12</b>
1.2	Conceptual background and components Geography of health	
1.3	Significance and approaches Geography of health	
1.4	Relation of Geography of health with other branches of social science	
<b>Unit- II -The Pollution Syndrome</b>		<b>12</b>
2.1	Air Pollution: Causes, Effects and remedial measures	
2.2	Water Pollution: Causes, Effects and remedial measures	
2.3	Radioactive Pollution: Causes, Effects and remedial measures	
2.4	Plastic Pollution: Causes, Effects and remedial measures	
<b>Unit III - Geography of Diseases</b>		<b>12</b>
3.1	Weather-related diseases and climate change and Global health	
3.2	Types of diseases and their regional pattern	
3.3	Case studies of communicable diseases - malaria and HIV Aids	
3.4	Case studies of non-communicable diseases - cancer and malnutrition	
<b>Unit IV -Health and Environment</b>		<b>12</b>
4.1	Linkages of health with environment	
4.2	Relation between development and health	
4.3	Population dynamics, urbanization, poverty and inequality	
4.4	Migration and related health issues	
<b>Unit V - Health Care Facilities</b>		<b>12</b>
5.1	Health care facilities in India	
5.2	Spatial Distribution of health care facilities in Maharashtra	
5.3	Health care policies in India	
5.4	Health Organisations: WHO, UNISEF, Red Cross Society and NGOs	

**Outcome of the course:**

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

1. Understand the nature, scope, approaches and evolution geography of Health Geography.
2. Understand the Causes, effects and remedial measures of air, water, radioactive and plastic pollution.
3. Learn the geographical background of diseases, types and case studies of communicable and non-communicable diseases
4. Understand the linkages of health with environment and health related issues.
5. Understand the Health care facilities, distribution, policies and health organisations in India.



**References**

1. Alice E. Marczewski and Michael Kamrin: Toxicology for the Citizen.
2. B. Brockband, J.Cohrsson, and V.T. Covello: The Risk Assessment Manual: A Guide to Understanding and Using Health and Environmental Assessments
3. Marilyn O. Ruiz: Geography of Disease
4. Michael Emch, Elisabeth Dowling Root, and Margaret Carrel: Health and Medical Geography Fourth Edition
5. Rhonda Humbird: AP Environmental Science - Part 1: The Living World

**Revised Syllabus w.e.f. Academic Year 2021-22 (CBSGS)****T.Y.B.A. Geography (Semester - V)****Paper: VIII-C: GEOGRAPHY OF DISASTER MITIGATION  
AND MANAGEMENT****COURSE CODE: UAR5GE8****Credit: 04**

<b>UNIT – I, Meaning &amp; Concept of Disaster &amp; Hazard</b>		<b>No. of Lectures</b>
1.1	Concepts of Disaster, Hazard, Vulnerability and Risks	<b>12</b>
1.2	Typology of hazards & Disasters- Natural Disasters & Man-made Disasters	
1.3.	Impacts of Disasters – Socio–economic and political	
1.4.	Need of Disaster Management in India	
<b>UNIT – II, Elements of Disaster Management</b>		<b>12</b>
2.1.	Disaster Management : Meaning & Concept	
2.2.	Role of International Organizations for Disaster Management – UNISDR, INSARAG, Red Cross	
2.3	Role of National Organizations for Disaster Management	
2.4	Role of NGOs & Community in Disaster Management	
<b>UNIT – III, Disaster Management : Methods &amp; Approaches</b>		<b>12</b>
3.1	Disaster Management : Historical Perspective	
3.2	Disaster Management : Methods & Approaches	
3.3	Pre- Disaster Stage of Management	
3.4	Post- Disaster Stage of Management	
<b>UNIT- IV, Natural Disaster and its Management in India</b>		<b>12</b>
4.1	Earthquake & Tsunami – Areas of occurrence, Causes, Effects, Management	
4.2	Flood – Areas of occurrence, Causes, Effects , Management	
4.3	Cyclone – Areas of occurrence, Causes, Effects , Management	
4.4	Famine – Areas of occurrence, Causes, Effects , Management	
<b>UNIT –V, Anthropogenic Disaster and its Management in India</b>		<b>12</b>
5.1	Industrial Hazards – Causes, effects and management with reference to Bhopal Gas Tragedy	
5.2	Terrorism – Causes, effects and management with reference to 26/11 Mumbai attack	
5.3	Wild Fire – Types, Causes, effects and management with reference to Uttarakhand forest fire 2016	
5.4	Accidents - Causes, effects and management with reference to Savitri river bridge collapse accident August 2016	

**Outcome of the course:**

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

1. Understand the definition, classification and impacts of disasters and hazards.
2. Understand the concept and role of national and international organisations for disaster management.
3. Understand the causes, effects and distribution of natural disasters and its management in India
4. Understand the anthropogenic disasters and its management in India.

**References:**

1. Coppola, D.P. (2011): Introduction to International Disaster Management. Elsevier, Butterworth- Heinemann
2. Dasgupta R. (2007): Disaster Management and Rehabilitation, Mittal Publications. New Delhi
3. Govt. Of India : Disaster Management in India , Ministry of Home Affairs, New Delhi
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**Revised Syllabus w.e.f. Academic Year 2021-22 (CBSGS)****T.Y.B.A. Geography (Semester - V)****Paper – IX: GEOSPATIAL TECHNOLOGY**

Course Code: UAR5GE9

Credit- 03

<b>UNIT - I</b>	<b>Remote Sensing – I</b>	<b>No. of Lectures</b>
1.1	Geospatial Technology: Concept, Components and Importance	<b>09</b>
1.2	Remote Sensing: Concept, Types, Process and Geographical Applications	
1.3	Electromagnetic Energy, EMR and EMS – Effects of Atmosphere on EMR, Spectral Reflectance and Spectral Signature or Curve - Platforms, Sensors and Resolution	
1.4	Elements of Visual Image Interpretation - Mapping of Thematic Layers and Visual Image Interpretation of Physical and Manmade Features	
<b>UNIT - II</b>	<b>Remote Sensing – II</b>	<b>09</b>
2.1	Concept of DEM, Digital image analysis: landuse and landform classification, 3D view of DEM	
2.2	Aerial Photographs: Concept, Process and Types	
2.3	Interpretation of Aerial Photographs	
2.4	Advanced Remote Sensing Technology - Use of Bhuvan website	
<b>UNIT - III</b>	<b>Global Positioning System</b>	<b>09</b>
3.1	GPS : Concept, Segments, Applications	
3.2	Types of GPS – GPS Data Accuracy and Errors	
3.3	Factors Affecting GPS Data - Global Navigation System	
3.4	Ground Survey and Demarcation of Point, Line and Polygon Features with GPS Device – Transfer GPS Data to Computer with Software's like Easy GPS	
<b>UNIT - IV</b>	<b>Geographic Information System – I</b>	<b>09</b>
4.1	GIS : Concept, Components and Applications - Map Projection and Coordinate System	
4.2	GIS Data Sources and Types	
4.3	Use of Image/map into GIS Software and Geo-referencing	
4.4	Creating Layers by Digitization of Point, Line and Polygon Features	
<b>UNIT V</b>	<b>Geographic Information System – II</b>	<b>09</b>
5.1	Functions of Database Creation – Input, Editing and Linking	
5.2	Spatial Database Analysis: Overlay, Merge, Query	
5.3	Map compositions for Map Layout and Design	
5.4	Preparation of Thematic Maps	

**Outcome of the course:**

By the end of the course,:

1. Understand the Concept, Components Importance and history of Geospatial Technology
2. Able to analyze and interpret the aerial photographs and satellite imageries.
3. Able to understand the concept and Applications GPS and capable to survey through GPS.
4. Understand the concept, Components and applications of GIS and capable to data analysis by using the GIS software.

**References:**

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# Semester- VI

Revised Syllabus w.e.f. Academic Year 2021-22 (CBSGS)

T.Y.B.A. Geography (Semester - VI)

Paper: IV: ENVIRONMENTAL GEOGRAPHY

COURSE CODE: UAR6GE4

Credit: 04

UNIT -I	Introduction to Environmental Geography		No. of Lectures
	1.1	Environmental Geography: Definition, Nature, Scope and Importance	12
	1.2	Environment: Meaning, Components and Types	
	1.3	Approaches to the Study of Man – Environment Relationship (Determinism, Possibilism, Probabilism, Stop and Go determinism)	
	1.4	Changing Man - Environment Relationship in a Historical Perspective	
UNIT-II	Ecosystem		12
	2.1	Meaning and Structure of Ecosystem	
	2.2	Ecological Pyramids and Productivity of Ecosystem	
	2.3	Functions of Ecosystem: Food Chain & Web, Energy Transfer, Biogeochemical Cycles	
	2.4	Types of Ecosystems: Aquatic, Terrestrial, and Aqua-Terrestrial Ecosystems	
UNIT-III	Biodiversity		12
	3.1	Biodiversity: Concept, Types and Distribution	
	3.2	Biodiversity Hotspots: Concept, and Distribution in India with Special Reference to Western Ghats	
	3.3	Threat to Biodiversity: Causes and consequences	
	3.4	Conservation of Biodiversity and Policies of Indian Government	
UNIT-IV	Environmental Challenges in India		12
	4.1	Air pollution and Water Pollution: Causes, consequences and measures	
	4.2	Land and Noise Pollution: Causes consequences and measures	
	4.3	Environmental Issues Related to Big Dams	
	4.4	Major environmental Movements in India	
UNIT-V	Sustainable Development and Environmental Management		12
	5.1	Environmental Management and Environmental Impact Assessment	
	5.2	Concepts and Need of Sustainable Development and goals for Environmental Management	
	5.3	Need of Environmental Education and Eco-friendly Lifestyle	
	5.4	Biosphere Reserves and Wildlife Management in India	

**Outcome of the course:**

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

1. Understand the nature, scope, importance and man-environment relationship in Environmental Geography
2. Understand the Structure, functions and types of ecosystem.
3. Acquire knowledge about biodiversity and its importance and Management.
4. Understand the concept, types, distribution and hotspots of biodiversity
5. Understand environmental problems there Cause, Effect and Remedies.
6. Understand the Sustainable Development and Environmental Management methods in India.

**References:**

1. Bharucha, E. (2004): "A Textbook for Environmental Studies", University Grants Commission, New Delhi, Downloaded from <https://www.ugc.ac.in/oldpdf/modelcurriculum/env.pdf>
2. Cunningham, W, and Cunnigham, M. (2017): "Principles of Environmental Science: Inquiry and Applications", McGraw Hill Education, Delhi
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**Revised Syllabus w.e.f. Academic Year 2021-22 (CBSGS)****T.Y.B.A. Geography (Semester - VI)****Paper No: VI-A : GEOGRAPHY OF TOURISM and RECREATION COURSE****CODE: UAR6GE5****Credit: 04**

<b>Unit-I: -Introduction to Tourism Geography</b>		<b>No of Lectures</b>
1.1	Definition , Nature and Scope	<b>12</b>
1.2	Types of Tourism	
1.3	Components of Tourism - Geographical and economical components	
1.4	Components of Tourism - Socio-cultural and political components	
<b>Unit-II: Types &amp; Impact of Tourism</b>		<b>12</b>
2.1	New Trends in Tourism (World, India and Maharashtra)	
2.2	Trends of Tourism Development in World	
2.3	Impact of Tourism on Environment- Environmental and economical	
2.4	Impact of Tourism on Socio-cultural and political components	
<b>Unit-III: – Role of Infrastructure and Technology in Tourism Development</b>		<b>12</b>
3.1	Accommodation and food services	
3.2	Transportation	
3.3	Travel Agencies and Tour Guide	
3.4	Documentation and Ticketing	
<b>Unit-IV: - Planning of Tourism and Tourism Organizations</b>		<b>12</b>
4.1	Need of Planning and Elements of Planning	
4.2	Levels of Planning	
4.3	Tourism Organizations - IATA, PATA, I.T.D.C. and M.T.D.C	
4.4	Incredible India campaign	
<b>Unit-V: Tourism Potential and Tourism Policy in Maharashtra</b>		<b>12</b>
5.1	Coastal tourism in Maharashtra	
5.2	Adventure tourism in Sahyadri	
5.3	Heritage tourism in Maharashtra	
5.4	Tourism Policy of Maharashtra State	

**Outcome of the course:**

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

1. Understand about nature, scope, development and factors of tourism development
2. Understand about infrastructure and ancillary services for tourism
3. They understand about types and impacts of tourism.
4. Understand Planning and organization about tourism
5. Understand the potential of tourism sectors in Maharashtra and India
6. Know about national tourism policy.

**References:**

1. Anand M.M., Tourism & Hotel Industry in India, Prentice Hall of India, New Delhi,
2. Bhatia A.K., Tourism Development, Sterling Publishers Pvt. Ltd. New Delhi.
3. Bhatia A.K., International Tourism, Sterling Publishers Pvt. Ltd. New Delhi
4. Bhatia A.K.,- Tourism in India , Sterling Publishers Pvt. Ltd. New Delhi
5. Geetanjali, Tourism Geography, Centrum press publishers, New Delhi
6. T.K. Sathyadev, P. Manjunath- Tourism Planning, Pacific books Internationals, Delhi.
7. Thakur S A (2016) : Paryatan Bhugol, Konkan Geographer's Publication
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## Revised Syllabus w.e.f. Academic Year 2021-22 (CBSGS)

## T.Y.B.A. Geography (Semester - VI)

## Paper No.: V –B: POLITICAL GEOGRAPHY

COURSE CODE: UAR6GE5

Credit: 04

<b>Unit – 1. : Introduction of Political Geography</b>		<b>No of Lectures</b>
1.1	Definition, Nature and Scope of Political Geography	12
1.2	Historical Development and Recent Trends in Political Geography	
1.3	Concept of state and factors	
1.4	Concept of Nation, Nation-State, and Nationalism	
<b>Unit – 2. : Approaches and Concepts in Political Geography</b>		12
2.1	Hartshorne’s Fundamental Approach: Centrifugal and Centripetal Forces	
2.2	Unified Field Theory	
2.3	Core Areas: Concept, Characteristics, and Distribution	
2.4	Capitals: Concept, Functions, and Classification	
<b>Unit – 3. : Frontiers and Boundaries</b>		12
3.1	Frontiers and Boundaries: Concepts and Distinction	
3.2	Functions of Frontiers and Boundaries	
3.3	Classification of Boundaries	
3.4	India’s Boundaries: Characteristics and Disputes	
<b>Unit – 4. : Geostrategic and Geopolitical Views</b>		12
4.1	Mackinder’s Heartland and Spykman’s Rimland Theory	
4.2	Geopolitics of Indian Ocean	
4.3	Geopolitics of International Water Disputes with Special Reference to India	
4.4	Changing Political Map of India	
<b>Unit – 5. : Electoral Geography</b>		12
5.1	Concept, Nature and Approaches of Electoral Geography	
5.2	Geography of Voting: Geographical Factors Affecting Elections	
5.3	Spatial Organization of Electoral Areas and Geography of Representation	
5.4	Challenges to Election System in India	

**Outcome of the course:**

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

1. Understand the nature, scope and historical development of Political Geography
2. Get knowledge about Evolution of states & nations.
3. Understand the frontiers and boundaries
4. Get knowledge of Geopolitical theories.
5. Investigate the problems and disputes in India
6. Understand about the Electoral Geography.

**References:**

1. Adhikari, S. (2015): "Political Geography", Rawat Publications, Jaipur
2. Adhikari, S. (2011): "Political Geography of India: A Contemporary Perspective", Sharda Pustak Bhawan, Allahabad
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6. Jones, M. (2004): "An Introduction to Political Geography: Space, Place and Politics", Routledge
7. Muir, R. (1995): "Modern Political Geography", McMillan, London
8. Painter, J. and Jeffrey, A. (2009): "Political Geography", Sage Publications
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11. पाटील (२०१५), राजकीय भूगोल, प्रशांत पब्लिकेशन, जळगाव

## Revised Syllabus w.e.f. Academic Year 2021-22 (CBSGS)

## T.Y.B.A. Geography (Semester - VI)

## Paper No: VI: TOOLS AND TECHNIQUES IN GEOGRAPHY FOR SPATIAL

## ANALYSIS-II (Practical)

COURSE CODE: UAR6GE6 Credit: 03

<b>Unit – I: Nature of data and Measures Central Tendency</b>		<b>No. of Lectures</b>
<b>1.1</b>	Meaning and types of data, variable, observation, observation value, simple, discrete data and continuous data	<b>09</b>
<b>1.2</b>	Frequency Distribution, Histogram, Frequency Polygon and Ogive curve	
<b>1.3</b>	Measures of Central Tendency- mean, median and mode	
<b>Unit –II: Measures of Dispersion and Deviation</b>		<b>09</b>
<b>2.1</b>	Mean Deviation and Quartile Deviation	
<b>2.2</b>	Standard Deviation and Variance	
<b>2.3</b>	Time Series Analysis Moving Averages (3 years and 5 years)	
<b>Unit –III: Correlation, Regression &amp; Hypothesis Testing</b>		<b>09</b>
<b>3.1</b>	Calculation of correlation coefficient - Pearson's and Spearman's methods	
<b>3.2</b>	Regression analysis	
<b>3.3</b>	Chi square test	
<b>Unit-IV: Sampling Techniques</b>		<b>09</b>
<b>4.1</b>	Sample design in Geography	
<b>4.2</b>	Point sampling –Linear, random and stratified	
<b>4.3</b>	Line sampling – Stratified and random	
<b>4.4</b>	Area sampling –Quadrant and random	
<b>Unit-V: Field work in Geography of any Rural and Urban one place/village</b>		<b>09</b>
<b>5.1</b>	<b>Collection of physiographic data</b> – Field observation, field sketching, collection of soil and rock samples, identification of vegetation etc.	
<b>5.2</b>	<b>Collection of socio-economic data</b> – interviews, questionnaire survey, visit to local governing office, NGO's etc	
<b>5.3</b>	<b>Collection of geospatial data</b> – toposheets, aerial photographs, Google images/maps, Bhuvan images etc.	
<b>5.4</b>	To prepare a geographical report <b>of a place</b> using the base of available 5.1, 5.2, and 5.3 aspects	

**Outcome of the course:**

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

1. Understand the Meaning and types of data and its presentation.
2. Understand and able to solve the examples of measures of central tendency, dispersion and deviation and correlation, regression and hypothesis testing.
3. Able to collect and analysis of data sampling.
4. Able to collect the field data, its processing and writing of research report.

**References :**

1. Ahirrao ani Karanjkehele, Pratyakshik Bhugol, Nirali Prakashan, Pune
2. Karlekar Shrikant- Bhoogol shastratil Sanshodhan Paddhati, daiomand Publication, Pune
3. Monkhouse F.J. - Maps & Diagrams, Methuen and Co., London, 1971 (3rd Edition, Revised).
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**Revised Syllabus w.e.f. Academic Year 2021-22 (CBSGS)****T.Y.B.A. Geography (Semester - VI)****Paper – VII: ECONOMIC GEOGRAPHY****COURSE CODE: UAR6GE7****Credit: 04**

<b>Units</b>	<b>Name of the Unit/Subunit</b>	<b>No of Lectures</b>
<b>Unit – 1: Introduction of Economic Geography</b>		
1.1	Definition, Nature and Scope	<b>12</b>
1.2	Branches of Economic Geography	
1.3	Approaches to study Economic Geography and Relation with other social sciences	
1.4	Resources: Concept, Classification and Importance in Economy	
<b>Unit – 2: Economic Activities</b>		
2.1	Economic Activities: Type and Characteristics	<b>12</b>
2.2	Factors Affecting Economic Activities	
2.3	Agriculture and Lumbering: Types and Distribution	
2.4	Fishing and Animal Husbandry: Types and Distribution	
<b>Unit – 3: Minerals and Industries</b>		
3.1	Minerals: Importance, Characteristics and Distribution of Iron Ore, Manganese, Coal and Mineral Oil and other important minerals	<b>12</b>
3.2	Factors Affecting Industrial Locations	
3.3	Weber's Industrial Location Theory	
3.4	Major Industrial Regions of the World	
<b>Unit – 4: Transport and International Trade</b>		
4.1	Transportation: Importance and influencing factors	<b>12</b>
4.2	Major Transport Patterns in the World	
4.3	Patterns of International Trade: Composition and Direction	
4.4	Major International Trade Organizations: WTO, OPEC, SAARC, G-20 and BRICS	
<b>Unit – 5 : Economic Development of India</b>		
5.1	Regionalization of India based on Levels of Economic Development	<b>12</b>
5.2	Globalization and its impact on Indian economy	
5.3	Special Economic Zones	
5.4	Issues related to Environment Economic Development in India	

**Outcome of the course:**

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

1. Understand the nature, scope branches and approaches of Economic Geography
2. Know the human economic activities
3. Understand the mineral resources and industrial development
4. Understand the Weber's industrial location theory
5. Understand the importance and pattern of transport and international trade
6. Understand the levels of economic development, Special Economic Zones and related issues in India.

**References:**

1. Datt, G. And Mahajan, A. (2016): "Datt and Sundaram's Indian Economy", S. Chand Publishing, New Delhi
2. Drezee J and Sen A.: "Indian Economic Development and Social Opportunity", Oxford University Press, London
3. Gautam, A. (2010): "Advanced Economic Geography", ShardaPustakBhawan, Allahabad
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9. Singh, J. and Dhillon, S.: "Agricultural Geography", Tata McGraw hill Publication Company Ltd., New Delhi.
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**Revised Syllabus w.e.f. Academic Year 2021-22 (CBSGS)****T.Y.B.A. Geography (Semester - VI)****Paper: VIII -A : BIOGEOGRAPHY****COURSE CODE: UAR6GE8****Credit: 04**

<b>Unit-I: Introduction to Biogeography</b>		<b>No, of Lectures</b>
1.1	Concept, definition, nature and scope	<b>12</b>
1.2.	Historical development and branches of Biogeography	
1.3.	Approaches to study Biogeography	
1.4.	Importance of Biogeographic studies	
<b>Unit-II: Ecosystem and Biosphere</b>		<b>12</b>
2.1.	Ecosystem: Concept, meaning and types	
2.2.	Components of ecosystem and ecosystem productivity	
2.3.	Biosphere: Concept, meaning and components	
2.4.	Biogeographic processes	
<b>Unit -III: Plant Community</b>		<b>12</b>
3.1.	Concept of plant community and classification of plants	
3.2.	Biotic succession and climax vegetation	
3.3.	Major plant formation and biomes- Tropical	
3.4.	Major plant formation and biomes- Temperate	
<b>Unit –IV: Marine Biogeography</b>		<b>12</b>
4.1.	Marine Biogeography meaning and concept	
4.2.	Types of ocean habitats	
4.3.	Biogeography of estuaries	
4.4.	Island biogeography	
<b>Unit-V: Biodiversity</b>		<b>12</b>
5.1.	Meaning and types of Biodiversity	
5.2.	Importance of Biodiversity	
5.3.	Causes of Biodiversity loss	
5.4	Biodiversity conservation	

**Outcome of the course:**

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

1. Understand the nature, scope, branches and approaches of Biogeography.
2. Understand the ecosystem and biosphere.
3. Understand the community and classification of plants.
4. Understand the marine biogeography
5. Understand the types, importance, loss and conservation of biodiversity.

**References:**

1. Flannery, T. 2015. *The Eternal Frontier: An Ecological History of North America and Its Peoples*. Grove/Atlantic, Inc.
2. Gavin, D. G. 2012. Biogeography. Pages 77–89 in J. P. Stoltman, editor. *21st Century Geography: A Reference Handbook*. SAGE Publications, Thousand Oaks, CA.
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7. Molles, M. C. 1999. *Ecology: Concepts and Applications*. WCB/McGraw-Hill.
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**Revised Syllabus w.e.f. Academic Year 2021-22 (CBSGS)****T.Y.B.A. Geography (Semester – VI)****Paper VIII-B: SOCIAL GEOGRAPHY****COURSE CODE: UAR6GE8****Credit: 04**

<b>UNIT – I: Introduction to Social Geography</b>		<b>TOTAL LECTURES</b>
<b>1.1</b>	Definitions, Nature, Scope and importance	<b>12</b>
<b>1.2</b>	Branches and Approaches in Social Geography	
<b>1.3</b>	Concept of Social Space and Socio-cultural Regions	
<b>1.4</b>	Globalization: The Process of Social and Spatial Change	
<b>UNIT – II: Elements of Social Geography -World</b>		<b>12</b>
<b>2.1</b>	Race: Concept and Basis of Classification and distribution	
<b>2.2</b>	Religion: Characteristics, Distribution of Major Religions in the World	
<b>2.3</b>	Language: Characteristics and Distribution of Major Linguistic Families in the World	
<b>2.4</b>	Tribes: Concept, Characteristics and Distribution of Major Tribes in the World	
<b>UNIT – III: : Elements of Social Geography –India</b>		<b>12</b>
<b>3.1</b>	Race: Major races and its distribution in India	
<b>3.2</b>	Religion: Major Religions and its distribution and its distribution in India	
<b>3.3</b>	Language: Major Linguistic Families in India	
<b>3.4</b>	Tribes: Distribution of Scheduled Tribes in India	
<b>UNIT – IV Contemporary Issues in India</b>		<b>12</b>
<b>4.1</b>	Religion related social issues	
<b>4.2</b>	Language related social issues	
<b>4.3</b>	Patterns of gender issues in India	
<b>4.4</b>	Socio-economic problems of indigenous communities in India	
<b>UNIT – V: Contemporary Social welfare policies of Government of India</b>		<b>12</b>
<b>5.1</b>	Religion related Policy	
<b>5.2</b>	Language related Policy	
<b>5.3</b>	Gender related Policy	
<b>5.4</b>	Policy related to indigenous communities in India	

### **Outcome of the course:**

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

1. Understand the nature, scope, and concept, relationship between culture and social environment.
2. Understand the race, religion, language and tribes in India and the world.
3. Understand the social groups and its segregation.
4. Understand the contemporary social issues in India.

### **References:**

1. Ahmad, A. (1999): "Social Geography", Rawat Publications, Jaipur
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**Revised Syllabus w.e.f. Academic Year, 2021-22 (CBSGS)****T.Y.B.A. Geography (Semester – VI)****Paper: VIII-C: GEOGRAPHY OF TRANSPORT****COURSE CODE: UAR6GE8****Credit: 04**

<b>Unit-I : Introduction to Transport Geography</b>		<b>No. of Lectures</b>
1.1	Concept and Definition of Geography of Transport	<b>12</b>
1.2	Nature and Scope Geography of Transport	
1.3	Definition of Distance and its types, Factors affecting on Transportation	
1.4	Significance of the study of Geography of Transport	
<b>Unit-II – Transport network system</b>		<b>12</b>
2.1	Transport network system – structure and properties	
2.2	Application of graph theory measures	
2.3	Location of routes and efficiency of network	
2.4	Conflicting aspects of decision making	
<b>Unit-III : Evolution of Modes of Transport</b>		<b>12</b>
3.1	Evolution of transport network and their environment	
3.2	Phases of growth and development of different modes of transport	
3.3	Factors influencing comparative cost structures and locational responses	
3.4	Global patterns of land, water and air transports	
<b>Unit-IV : Theoretical Framework of Transport</b>		<b>12</b>
4.1	Connectivity and its Measurement	
4.2	Accessibility and its Measurement	
4.3	Taffe's model	
4.4	Gravity model	
<b>Unit-V: Transportation Issues in India</b>		<b>12</b>
5.1	Issues associated with roadways transport network	
5.2	Issues associated with railways transport network	
5.3	Issues associated with water transport development	
5.4	Issues associated with air transport development	

**Outcome of the course:**

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

1. Understand the concept, nature, scope and significance of Transport Geography.
2. Understand the transport network system.
3. Understand the evolution and pattern of modes of transport.
4. Understand the models about the transport.
5. Understand the issues of transportation in India.

**References:**

1. Chorley R.J. & Haggett P. (1967): Models in Geography Methuen & Co. London.
2. Hagget, F and Chorley, R.J. Network Analysis', Edward Arnold, London, 1968.
3. Hay, A.: Transport Economy, MacMillan, London, 1973.
4. Hoyle, B.S.(ed.): Transport and Development, MacMillan, London, 1973.
5. Hurst, M.E.(ed.) (1974): Transportation Geography, McGraw-Hill.
6. Raza, M. and Agrawal Y.P. : Transport Geography of India, Concept. New Delhi, 1985.
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8. Saxena, H. M. (2010): Transport Geography, Rawat Publications, Jaipur
9. Taffe, E.J. & Gauthier (Jr.) H.L.: Geography of Transportation, Prentice-Hall, Englewood Cliffs, N.J., 1973.
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11. White H.P. and Senior, M.L. Transport Geography, Longman, London, 1983.
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13. मगर जयकुमार (२००८) भारताचा भूगोल, विद्या प्रकाशन, नागपूर.

**Revised Syllabus w.e.f. Academic Year, 2021-22 (CBSGS)****T.Y.B.A. Geography (Semester – VI)****Paper: IX: RESEARCH METHODOLOGY IN GEOGRAPHY****COURSE CODE: UAR6GE9****Credit: 03**

<b>UNIT I</b>	<b>Research Methodology in Geography</b>	<b>No. of Lectures</b>
1.1	Research in Geography: Concept, Classification, Steps and Significance Review of Literature	
1.2	Research Methodology: Meaning and Types (Qualitative and Quantitative)	
1.3	Defining the Research Problem: Meaning, Need and Techniques	
1.4	Research Designs: Concept, Need and Objectives	
<b>UNIT II</b>	<b>Data Collection and Processing</b>	<b>09</b>
2.1	Sample Design, Measurement and Scaling	
2.2	Data Collection in Geography: Types (Primary and Secondary) and Methods (Observation, Questionnaire, Schedule, Interview, etc.)	
2.3	Role of Internet in Research: Online Research Referencing (Shodhganga, INFLIBNET, Research Gate, Academia, Mendeley, etc.)	
2.4	Data Processing: Editing, Coding, Classification and Tabulation	
<b>UNIT III</b>	<b>Data Analysis</b>	<b>09</b>
3.1	Data Analysis: Meaning, Significance and Types	
3.2	Using MS-Excel and SPSS for Data Analysis: Graphical, Descriptive and Inferential Statistical Representation	
3.3	Hypothesis: Meaning, Types, Levels of Significance, Degrees of Freedom and Errors	
3.4	Statistical Techniques for Hypothesis Testing	
<b>UNIT IV: Digital Data Analysis and Research Report Writing</b>		<b>09</b>
4.1	Techniques of Spatial and Non-spatial data Analysis in GIS Software's (Q-GIS/Gramm ++)	
4.2	Techniques of Data Analysis in Satellite Image Processing Software's(SAGA)	
4.3	Basics of Research Report Writing: Layout, Structure, Language, Bibliography, References and Footnotes	
4.4	Ethics in Research	
<b>UNIT V</b>	<b>Preparation of Research Report</b>	<b>09</b>
5.1	Research Report on any One Theme in Physical Geography or Human Geography by following the all steps of Research	
5.2	Field Visit/Tour for Research Report	

**Outcome of the course:**

By the end of the course,:

1. Students will be able to understand the concept, types and stages in the research methodology, formulation of research and research design.
2. Students will know methods of data collection and its processing and role of internet in research.
3. Students will be able to prepare the hypothesis and also be able to do the hypothesis testing by using computer and statistical techniques.
4. Students will be able to spatial and non-spatial data analysis in GIS software's and competent for research writing.
5. Students will be able to prepare the research report on any one theme in Physical Geography or Human Geography.

**References:**

1. K.L. Narasimha Murthy (2014): Research Methodology in Geography(A Text Book), Concept Publishing company Pvt Ltd, New Delhi
2. H. N. Misra, Vijai P. Singh(2002): Research Methodology in Geography – Social, Spatial and Policy Dimensions, Rawat Publications, Jaipur and New Delhi
3. Kothari C. R. (2004) : Research Methodology - Methods and Techniques, New Age International Publishers
4. Y.K.Singh, Dr. R.B. Bajpai(2008): Research Methodology-Techniques and Trends, A P H Publishing Corpn, New Delhi
5. R. Cauvery, U.k. Sudha Nayak (2003): Research Methodology, S.Chand & Company Ltd., New Delhi
6. O. R. Krishnaswami, M. Ranganatham (2005): Methodology of Research in Social Sciences, Himalaya Publishing House, Mumbai
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8. [bhuvan.nrsc.gov.in](http://bhuvan.nrsc.gov.in)
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11. Best J. W. and Khan J. V. (1998) : Research in Education, Allyn and Bacon, USA
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15. George Joseph (2003): Fundamental of Remote Sensing, Universities Press, Hyderabad
16. Karlekar S. and Kale M. (2005): Statistical Analysis of Geographical Data, Diamond Publication
17. Robinson A.H. (1985): Elements of Cartography, Vol.VI, John Wiley and Sons, New York
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20. Sarkar A. (2013) : Quantitative Geography – Techniques and Presentations, Orient Blackswan Pvt. Ltd., New Delhi, India
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**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.Com.**

**Revised Syllabus of F.Y.B. Com. - Environmental Studies**  
**Choice Based Credit & Grading System (75:25)**  
**w.e.f. Academic Year 2019-20**

**Details of the course:**

Sr. No.	Heading	Particulars
1	Title of Course	Environmental Studies
2	Eligibility for Admission	12 <sup>th</sup> Commerce/ Science of all recognised Board
3	Passing marks	35%
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	2019-2020

**Preamble of the Syllabus:**

Environmental Studies is a course at F.Y. B.Com. at under graduation level program of the B.Com. This course is designed to procure awareness among the learners about the environment as a whole and its related problems. The syllabus is prepared to give the sound knowledge and understanding of environment to undergraduate students at first year of the B.Com degree course. The content of syllabus is prepared to make the students capable to understand the relation between the environment and the commercial activities. Also to create an insight into various environmental issues at global, national and regional level and measures for environmental conservation. This course will cultivate a sense of awareness among learners on the need to conserve our environment

**Objectives of the course:**

1. To demonstrate and analyse knowledge of the facts, processes, and methods of environmental Geography
2. To create an environmental awareness among commerce students.
3. To make aware students about various environmental factors and its relation to the field of Commerce.
4. To highlight functional and spatial links between environment, economy and society.
5. To create an insight into various environmental issues at global, national and regional level and measures for environmental conservation.

**Outcome of the course:**

1. Learners will demonstrate a proficiency in knowledge of essential concepts of Environmental Studies.
2. This course will cultivate a sense of awareness among learners on the need to conserve our environment.
3. Learners will contribute in the efforts to make the environment clean, greener and a better place to live in.

**Title of the Papers:**

**F. Y. B. Com. Environmental Studies**

For the subject of Environmental Studies there shall be two papers for 60 lectures each comprising of five units of 12 lectures each.

**Semester-I**

**Paper-I: Environmental Studies**

**COURSE CODE: UCM1EVS (2019-20), Credit - 4**

**Semester-II**

**Paper-I: Environmental Studies**

**COURSE CODE: UCM1EVS (2019-20), Credit - 4**

**Scheme of Examination for Semester I and II:**

**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/</b>	<b>05 Marks</b>
	<b>Match the pairs</b>	<b>05 Marks</b>
	<b>B) Define the terms/ Answer in one sentence</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)**

**F.Y.B.Com. Environmental Studies, Semester- I and II**

<b>Duration: 2½ hours</b>		<b>Marks: 75</b>
<p><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.</p>		
<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</b>	<b>15 marks</b>
	A)	(08 Marks)
	B)	(07 Marks)

**Syllabus for Semester I:**

**University of Mumbai**  
**Changu Kana Thakur A.C.S. College, New Panvel (Autonomous)**  
**Revised Syllabus w.e.f. Academic Year, 2019-20 (CBSGS)**  
**F.Y.B.Com. Environmental Studies, Semester- I**  
**COURSE CODE: UCM1EVS (2019-20), Credit – 4**

<b>Unit-I: Environment and Ecosystem</b>		<b>12 (lectures)</b>
1.1	Environment: Concept and components	
1.2	Concept of an ecosystem: Components and types,	
1.3	Functioning and structure: Food chain and food web, ecological pyramid, hydrological cycle, carbon cycle and nitrogen cycle	
1.4	Importance of Environmental Studies.	
<b>Unit-II: Natural Resources and Sustainable Development</b>		<b>12 (lectures)</b>
2.1	Concept of natural resources: Classification and types of resources	
2.2	Factors influencing resource utilization	
2.3	Problems associated with water, forest and energy resources	
2.4	Need for conservation and measures for sustainable development of resources	
<b>Unit-III: Growth of Population and Emerging Issues of Development</b>		<b>12 (lectures)</b>
3.1	Population explosion in the world and in India and related issues	
3.2	Pattern of population growth in the world and in India and associated issues	
3.3	Population policies of India;	
3.4	Environment and human health; Human development index and the World happiness index	
<b>Unit-IV: Urbanization and Environment</b>		<b>12 (lectures)</b>
4.1	Concept of urbanization: Trends of urbanization-World and India	
4.2	Urbanization and related issues: overpopulation and pressure on civic amenities, slums proliferation, growth of informal sector, dilapidated buildings and redevelopment issues, sick units etc.	
4.3	Environmental issues in urban area: Air pollution, water pollution, land pollution and loss biodiversity	
4.4	Concept and need of Smart Cities and safe cities in India - Sustainable urban development	
<b>Unit-V: Reading of Thematic Maps and Map Filling (Practical Component)</b>		<b>12 (lectures)</b>
5.1	Reading of Thematic Maps: Located bars, Circles, Pie charts, Isopleth, Choropleth and Flow map, Pictograms – (Only reading and interpretation)	
5.2	Map filling of World: (Environmentally significant features) Using point, line and polygon segment.	

## Reference Books:

1. Asolekar S, Gopichandran R. 2005, '*Preventive Environmental Management - an Indian perspective*', CEE, Ahmedabad, Foundation Books Pvt Ltd, Daryaganj
  2. Chambers N., Simons C., Wackernagel M., 2006, '*Sharing Nature's Interest - Ecological footprints as an indicator of sustainability*'.
  3. Doniwal H. K., '*Urban Geography*', GNOSIS, Delhi, 2009.
  4. Dresner S., 2005, '*The principles of sustainability*', Earthscan publication Ltd, London.
  5. Gandotra V., Patel S., 2008, '*Environmental problems and strategies*', Serials Publication, New Delhi
  6. Hulse J. H., 2007, '*Sustainable Development at risk - Ignoring the past*', Cambridge University Press India Pvt Ltd., New Delhi.
  7. Mohanta R., Sen A., Singh M.P., 2009, '*Environmental Education - Vol. 1*', APH publishing Corporation New Delhi.
  8. Perumal M., Veerasekaran R., Suresh M., Asaithambi M., 2008, '*Environmental and Ecological issues in India*', Abhijeet Publication, Delhi
  9. Pednekar H.M., Parmar R.O. and Others.. 2016, '*Environmental Studies*' Sheth Publishers Private Ltd, Mumbai
  10. Prabu P.C., Udayasooriyan C., Balasubramanian G, 2009, '*An introduction to Ecology and Environmental Science*', Avinash Paperbacks, New Delhi.
  11. Purvis M. and Grainger A., 2005, '*Exploring Sustainable Development - Geographical perspectives*', Earthscan Publication, UK.
  12. Rajgopalan R., 2005, '*Environmental Studies - from crisis to cure*', Oxford University press, New Delhi.
  13. Reddy K. P., Reddy D. N., 2003, '*Environmental Education*', Neelkanth Publication, Hyderabad.
  14. Santra S.C., 2004, '*Environmental Science*', New Central Book agency Pvt Ltd, Kolkata.
  15. Saxena H.M., 2000, '*Environmental Management*', Rawat Publication, New Delhi, pp.
  16. Sinha S. P., Falguni R., Prasad M., Nanghia H.R., 1993, '*Instant Encyclopaedia of Geography*', Mittal Publication, New Delhi.
  17. Sudhir M.A., Alankara M. M., 2003, '*Environmental issues*', Reliance publishing house, New Delhi.
  18. Swarup R.S., Mishra S.N., Juahari V.P, 1992, '*Encyclopaedia of Ecology, environment and pollution control - 20*', Mittal publication, New Delhi
  19. Tiwari V., 2009, '*A textbook of Environmental studies*', Himalaya Publications House, New Delhi
  20. Tomar A., 2007, '*Environmental Education*', Kalpaz publication, New Delhi
  21. Uberoi N.K., 2007, '*Environmental Management*', Excel Books, New Delhi
  22. William M., Grossa J., 2002, '*Environmental Geography - Science, Land use and Earth Systems*', John Wiley and Sons Inc USA.
  23. Wright R., 2008, '*Environmental Science - Towards sustainable future*', Eastern Economy Edition, Prentice hall Inc, New Jersey, U.S.A
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**Syllabus for Semester II:**

**University of Mumbai**

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

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

**F.Y.B.Com. Environmental Studies, Semester- II**

**COURSE CODE: UCM2EVS (2019-20), Credit – 4**

<b>Unit-I: Solid Waste Management for Sustainable Society</b>		<b>12 (lectures)</b>
1.1	Concept and classification of solid wastes; Types and sources of solid waste	
1.2	Environmental impact of solid waste pollution	
1.3	Solid waste management : Initiatives and measures at global, national and local level	
1.4	Role of society in solid waste management in urban and rural areas	
<b>Unit-II : Agricultural Practices and Environmental Degradation</b>		<b>12 (lectures)</b>
2.1	Environmental problems associated with agriculture: Loss of productivity, land degradation, desertification	
2.2	Extensive use of water; Depletion of fresh water resources (intrusion of saline water, dry beds or streams and rivers and aquifers/ water pollution: surface and subsurface)	
2.3	Health hazards associated with modern agricultural practices: All - human, animals, birds and vegetation on land and in water	
2.4	Sustainable agricultural practices: Initiatives at global level and in India	
<b>Unit-III: Tourism and Environment</b>		<b>12 (lectures)</b>
3.1	Tourism: Meaning, nature, scope and importance, typology of tourism	
3.2	Tourism potentials in India and challenges before India, tourism policy of India	
3.3	Consequences of tourism : Positive and negative Impacts on economy, culture and environment	
3.4	Sustainable tourism practices	
<b>Unit-IV: Environmental Movements and Management</b>		<b>12 (lectures)</b>
4.1	Environmental movements in India: Save Ganga plan, Save tiger campaign, Save Western Ghats movement	
4.2	Environmental Management: Concept, need and relevance; concept of ISO 14000 and ISO 16000	
4.3	Concept of Carbon Bank and Carbon Credit , EIA , ecological footprint	
4.4	Applications of GIS in Environmental Management : Concept and components, importance of Geo-spatial technology in environmental management	
<b>Unit-V: Map Filling (Practical Component)</b>		<b>12 (lectures)</b>
5.1	Map filling of Konkan Region (Environmentally significant features) using point, line and polygon segment	
5.2	Map filling of Mumbai: (Environmentally significant features) using point, line and polygon segment	

## Reference Books:

1. Asolekar S, Gopichandran R. 2005, '*Preventive Environmental Management - an Indian perspective*', CEE, Ahmedabad, Foundation Books Pvt Ltd, Daryaganj
2. Chambers N., Simons C., Wackernagel M., 2006, '*Sharing Nature's Interest - Ecological footprints as an indicator of sustainability*'.
3. Doniwal H. K., '*Urban Geography*', GNOSIS, Delhi, 2009.
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5. Gandotra V., Patel S., 2008, '*Environmental problems and strategies*', Serials Publication, New Delhi
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21. Uberoi N.K., 2007, '*Environmental Management*', Excel Books, New Delhi
22. William M., Grossa J., 2002, '*Environmental Geography - Science, Land use and Earth Systems*', John Wiley and Sons Inc USA.
23. Wright R., 2008, '*Environmental Science - Towards sustainable future*', Eastern Economy Edition, Prentice hall Inc, New Jersey, U.S.A

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