

UNIVERSITY OF MUMBAI



SYLLABUS FOR THIRD YEAR BACHELOR OF ARTS AND

BACHELOR OF SCIENCE

Program: T.Y.B.A. and T.Y. B.Sc.

Course: Geography

Semester - V and VI at the T.Y.B.A. and T.Y. B.Sc.

Paper IV to IX

**(Credit Based Semester and Grading System (CBSGS) with
effect from the academic year 2018-19)**

University of Mumbai
Revised Syllabus w.e.f. Academic Year, 2018-19 (CBSGS)

T.Y.B.A. / T.Y.B.Sc. Geography, Semester – V, Paper – IV

Subject Title: GEOGRAPHY OF SETTLEMENTS

COURSE CODE: _____ (2018-19), Credit: 04

UNIT – I: Introduction of Settlement Geography		No. of Lectures
1.1	Settlement geography: definitions, nature and scope	12
1.2	Settlement types, their characteristics and differences	
1.3	Factors influencing growth and distribution of settlements	
1.4	Importance of settlement studies in geography	
UNIT – II: Geography of Rural Settlements		12
2.1	Origin and growth of settlements - evolution of rural settlements	
2.2	Site and situation of rural settlements	
2.3	Classification of rural settlements on the basis of population and patterns	
2.4	Classification of rural settlements on the basis of spacing and functions	
UNIT – III: Rural Settlements in India		12
3.1	Distribution and density of rural settlements in India	
3.2	Structure of house and building materials in India	
3.3	Regional variations in rural settlement patterns in India	
3.4	Morphology of rural settlement in India	
UNIT – IV: Urban Settlements		12
4.1	Origin and growth of urban settlements	
4.2	Classification of urban settlements on the basis of culture and functions	
4.3	Hierarchy of urban Settlement: rank size rule and primate city	
4.4	Ashok Dutts’s models of South Asian city: port city and bazaar city	
UNIT – V: Urban Settlements in India		12
5.1	Urbanisation in India: Trends, patterns and types of towns	
5.2	Morphology of urban settlements in India (With reference to a port and inland city)	
5.3	Urban problems in Indian cities	
5.4	Smart city: Concept, need and implementation in India	

REFERENCES:

- Deshpande, C. D. (2005): “Cities: A Geographical Study”, Translated by V. G. Amrite, Manan Prakashan, Mumbai
- Gharpure, V. (2013): “Nagari Bhugol”, (Marathi) Pimpalpure and Company Publishers, Nagpur
- Gharpure, V. (2013): “Vasti Bhugol”, (Marathi) Pimpalpure and Company Publishers, Nagpur
- Gharpure, V. (2017): “Manavi Bhugol”, (Marathi) Pimpalpure and Company Publishers, Nagpur
- Ghosh. S. (2015): “Introduction to Settlement Geography”, Orient Blackswan Private Limited, Hyderabad
- Jyptirmoy Sen (2007): A Text Book of Social and Cultural Geography,” Kalyani Publsiher, New Delhi.
- Knowles, R and Wareing, J. (1996): “Economic and Social Geography”, the Made Simple Series, Rupa & Co., Calcutta
- Leong, Goh-Cheng and Morgan, G. (1994): “Human and Economic Geography”, Oxford University Press, Oxford
- 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>
- Siddhartha, K and Mukherjee, S. (2016): “Cities, Urbanisation and Urban Systems (Settlement Geography)”, KitabMahal, Allahabad
- Singh, L. R. (2009): “Fundamentals of Human Geography”, Sharda Pustak Bhawan, Allahabad
- Singh, R. Y. (2012): “Geography of Settlements”, Rawat Publications, Jaipur
- Tiwari, R. C. (2016): “Geography of India”, Pravalika Publications, Allahabad
- Thakur S. A. and others – “Settlement Geography”/ *Vasti Bhugol*- Konkan Geographers, Publication (2012)
- घारपुरे विठ्ठल (१९९९)वस्ती भूगोल, पिंपळापुरे अँड कं.,नागपूर

- सावंत प्रकाश (१९९८) नागरी भूगोल, फडके प्रकाशन, कोल्हापूर
- सवदी ए.बी. (२०१०) नागरी भूगोल, निराली प्रकाशन, पुणे

QUESTION PAPER PATTERN:

Time: 3 hours		Marks; 100
N.B. 1. All questions are compulsory and carry equal marks. 2. Use of Map Stencils is permitted. 3. Draw sketches and diagrams wherever necessary.		
Q. 1	Long answer question on Unit-I	20 Marks
OR		
	Long answer question on unit –I for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 2	Long answer question on Unit-II	20 Marks
OR		
	Long answer question on unit –II for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 3	Long answer question on Unit-III	20 Marks
OR		
	Long answer question on unit –III for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 4	Long answer question on Unit-IV	20 Marks
OR		
	Long answer question on unit –IV for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 5	Long answer question on Unit-V	20 Marks
OR		
	Long answer question on unit –V for 20 Marks or Two short answer questions each 10 Marks	20 Marks

University of Mumbai
Revised Syllabus w.e.f. Academic Year, 2018-19 (CBSGS)
T.Y.B.A. / T.Y.B.Sc. Geography, Semester – V Paper: V-A
GEOGRAPHY OF MAHARASHTRA

COURSE CODE: _____, Credit: 04

Unit-I : Maharashtra: Geographical Setting		TOTAL LECTURES
1.1	Location, extent and boundaries	12
1.2	Administrative setup and divisions	
1.3	Relief and climate	
1.4	Drainage system	
Unit-II : Natural Resources		12
2.1	Soils	
2.2	Natural vegetation	
2.3	Minerals	
2.4	Power resources	
Unit-III : Human Resources		12
3.1	Population growth	
3.2	Distribution –urban-rural and population density	
3.3	Structure of population : Age-sex	
3.4	Occupational structure of population	
Unit-IV :Agriculture, Fishing and Livestock Resources		12
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	
Unit-V: Industries, Trade and Transport		12
5.1	Major industrial regions	
5.2	Role of transport in industrial development	
5.3	Industrial issues and policies	
5.4	Trade and transport	

References:

- Jaymala Diddee, S.R. Jog, V.S. Kale Geography of Maharashtra
- Johns: Economic Geography -
- Khullar: Geography of India
- Majid Hussein: Geography of India
- Oxford: Oxford School atlas-
- Savinder Singh Environmental Geography
- Sharma: India's economic and commercial geography
- प्रा.सवदी: महाराष्ट्रभूगोल
- देशपांडेएसएस: महाराष्ट्राचेअर्थशास्त्र
- महाराष्ट्राचाभूगोल - प्रा.सी.डीदेशपांडे
- महाराष्ट्र- सवदीआणिकेचे
- महाराष्ट्राचाभूगोल - बी.अरूणाचलम
- महाराष्ट्र 2006 - संतोषदास्ताने
- जनगणनाऑटलस – महाराष्ट्रसरकार
- महाराष्ट्राचेनकाशे-डॉ.के.आरदिकित
- महाराष्ट्रातीलजलसंपदा- प्रा. डॉ.एस.व्ही.ढमढेरे
- महाराष्ट्रातीलनद्या – श्रीकांततापीकर
- महाराष्ट्राचाभूगोल – डॉ.सुरेशफुले

QUESTION PAPER PATTERN:

Time: 3 hours		Marks; 100
N.B. 1. All questions are compulsory and carry equal marks. 2. Use of Map Stencils is permitted. 3. Draw sketches and diagrams wherever necessary.		
Q. 1	Long answer question on Unit-I	20 Marks
OR		
	Long answer question on unit –I for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 2	Long answer question on Unit-II	20 Marks
OR		
	Long answer question on unit –II for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 3	Long answer question on Unit-III	20 Marks
OR		
	Long answer question on unit –III for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 4	Long answer question on Unit-IV	20 Marks
OR		
	Long answer question on unit –IV for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 5	Long answer question on Unit-V	20 Marks
OR		
	Long answer question on unit –V for 20 Marks or Two short answer questions each 10 Marks	20 Marks

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Revised Syllabus w.e.f. Academic Year, 2018-19 (CBSGS)
T.Y.B.A. / T.Y.B.Sc. Geography, Semester – V, Paper : V-B

Subject Title: POPULATION GEOGRAPHY
COURSE CODE: _____, Credit: 04_____

UNIT- I, Introduction to Population Geography		TOTAL LECTURES
1.1	Concept, definition, nature, scope, importance	12
1.2	Evolution and recent trends	
1.3	Basic sources of population data and their important elements	
1.4	Population geography and other social sciences	
UNIT- II, Population Dynamics		12
2.1	Population growth in the world (continent wise and level of development)	
2.2	Population growth in India	
2.3	World : Population density and its determinants	
2.4	Structure of population in developed and developing world (Age and Sex, Rural and Urban)	
UNIT- III, Theories of Population Growth		12
3.1	Demographic Transition Model	
3.2	Malthu’s Population Theory	
3.3	Leibestein’s motivational theory of population growth	
3.4	Theory of optimum population	
UNIT- IV, Migration		12
4.1	Definition and Classification of Migration	

4.2	Causes and Consequences of Migration	
4.3	Recent trend of migration in India	
4.4	Issues of infiltration and its impacts in India	
UNIT- V, Contemporary Issues		12
5.1	Ageing population	
5.2	Gender issues -declining sex ratio, literacy gap,	
5.3	Poverty and unemployment in India	
5.4	Rapid urbanization in India	

Reference:

- Bhende A. and Kanitkar T.,(2000):*Principles of Population Studies*, Himalaya Publishing House
- Chandna R.C. and Sidhu M.S., 1980: *An Introduction to Population Geography*, Kalyani Publishers
- Chandna, R C (2006), *Jansankhya Bhugol*, Kalyani Publishers, Delhi
- Chandna, R C (2014),: *Geography of Population: Concepts, Determinants and Patterns*, Kalyani Publishers, Delhi
- Tiwari Ram Kumar (2015) *Jansankhya Bhugol Pravalika* Publication, Allahabad
- Thakur, Patil, Datta, Pednekar, Roy, and Kamble (2016): *Population Geography*, Konkan Geographers Association in India
- Roy. D. (2015) *Population Geography*, Books & Allied Publication, Kolkata

QUESTION PAPER PATTERN:

Time: 3 hours	Marks; 100
N.B. 1. All questions are compulsory and carry equal marks. 2. Use of Map Stencils is permitted. 3. Draw sketches and diagrams wherever necessary.	
Q. 1	Long answer question on Unit-I 20 Marks
OR	
	Long answer question on unit –I for 20 Marks or 20 Marks

	Two short answer questions each 10 Marks	
Q. 2	Long answer question on Unit-II	20 Marks
	OR	
	Long answer question on unit –II for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 3	Long answer question on Unit-III	20 Marks
	OR	
	Long answer question on unit –III for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 4	Long answer question on Unit-IV	20 Marks
	OR	
	Long answer question on unit –IV for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 5	Long answer question on Unit-V	20 Marks
	OR	
	Long answer question on unit –V for 20 Marks or Two short answer questions each 10 Marks	20 Marks

University of Mumbai
Revised Syllabus w.e.f. Academic Year, 2018-19 (CBSGS)
T.Y.B.A. / T.Y.B.Sc. Geography, Semester – V. Paper No: VI

**Subject Title: TOOLS AND TECHNIQUES IN GEOGRAPHY FOR
 SPATIAL ANALYSIS-I (Practical)**

COURSE CODE: _____, Credit: __03__

Unit -I	Map Projections	Lectures
		09
	1.1. Basic Concepts – Definition, scale, direction, azimuth, graticule, great circle, true meridian, types of projections, choice of projections	
	1.2. Zenithal Polar Projections – Equal Area, Equidistant	
	1.3. Cylindrical Projections - Equal Area, Equidistant	
	1.4. Conical Projections - One standard parallel, two standard parallel	
Unit-II	Map Basic	Lectures
	2.1. Basic elements of map and calculation or identification of relief, direction, bearing and distance	09
	2.2. Area calculation with square method and strip method	
	2.3. Demarcation of watershed on toposheet, Tracing of stream network and contours	
Unit-III	Survey of India Toposheets	Lectures
	3.1. Signs and symbols, marginal information	09
	3.2. Study of physiography, drainage and vegetation (one full toposheet of hilly and plateau region each)	
	3.3. Study of settlements – size, pattern, utilities (one full toposheet of plains and urban region each)	
	3.4. Study of transport network (one full toposheet of plains and urban area each)	
Unit-III	Preparation of Thematic maps (Manually)	Lectures
	4.1. Preparation of a district thematic maps with actual data- Dot and Pictogram	09
	4.2. Preparation of a district thematic maps with actual data- Choropleth and Isopleth	
	4.3. Preparation of a district thematic maps with actual data- Located bar, located circle and pie chart	
Unit-V	Use of computers in geographical data representation	Lectures
	5.1. Construction of line graphs & simple and multiple bar graphs	09

	using MS-excel	
	5.2. Construction of divided bar graphs & pie charts using MS-excel	
	5.3. Preparation of datasheet in SPSS	
	5.4. Calculation of central tendency and standard deviation using SPSS	

References -

- Ahirrao ani Karanjkehe – प्रात्यक्षिक भूगोल,
- Karlekar Shrikant- प्रात्यक्षिक भूगोल, डायमंड पब्लिकेशन्स
- Karlekar Shrikant- Bhoogol shastratil Sanshodhan Paddhati, डायमंड पब्लिकेशन्स
- Monkhouse F.J. - Maps & Diagrams, Methuen and Co., London, 1971 (3rd Edition, Revised).
- NCERT - Textbook for Class-12, Practical Work in Geography Part II
- Peter A. Rogerson - Statistical Methods for Geography, Sege Publishers -2001
- Robinson A.H. - Elements of Cartography, Wiley
- Sarkar Ashis - Practical Geography, Orient Black Swan – 2015
- Sarkar Ashis –Quantitative Geography, Orient Black Swan – 2013
- Singh R.L. & Singh P. B. - Elements of Practical Geography, Kalyani Publishers 2005
- Stoddard Robert – Field techniques and research methods in geography, Geography faculty publication <http://digitalcommons.unl.edu/geographyfacpub/26>
- Thakur S. A. - प्रात्यक्षिक भूगोल, Konkan Geographer's publication (2016)

QUESTION PAPER PATTERN

(SEM - VI)

MARKS: - 100 TIME: 4 HRS

N.B:

1. All questions are compulsory.
2. Figures to the right indicate marks to a sub-question.
3. Use of map stencils and simple calculator is allowed.

Q. 1	Unit-I	16 Marks
Q. 2	Unit-II	16 Marks
Q. 3	Unit-III	16 Marks
Q. 4	Unit-IV	16 Marks
Q. 5	Unit-V	16 Marks
Q. 6	Journal and Viva	20 Marks

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Revised Syllabus w.e.f. Academic Year, 2018-19 (CBSGS)

T.Y.B.A. / T.Y.B.Sc. Geography, Semester – V, Paper – VII

Subject title: REGIONAL PLANNING AND DEVELOPMENT

COURSE CODE: _____ (2018-19), Credit: 04_____

UNIT – I: Understanding Regional Planning		No. of Lectures
1.1	Planning: Concept, types and need	12
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	
UNIT – II: Concept of Region in Planning		12
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	
UNIT – III: Understanding Regional Development		12
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	
UNIT – IV: Regional Planning in India – I		12
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	
UNIT – V: Regional Planning in India – II		12
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	

REFERENCES:

- Chand, Mahesh (2000): “Regional Planning In India”, Allied Publishers Ltd., Mumbai
- Chandana, R. C. (2016): “Regional Planning and Development”, Kalyani Publishers, New Delhi
- Dhamdhere, S. et al (2015): “Arthik Vikas Ani Niyojan”, (Marathi), Diamond Publications, Pune
- Dikshit, J. K. (2011): “The Urban Fringe of Indian Cities: Professor Jaymala Diddee Felicitation Volume”, (ed.) Rawat Publications, Jaipur
- Jhingan, M. L. (2017): “The Economics of Development and Planning”, Vrinda Publications (P) Limited, Delhi
- Kant, S. et al (2004): “Reinventing Regional Development: Festschrift to Honour Gopal Krishnan”, (ed.) Rawat Publications, Jaipur
- Misra, R. P. (2002): “Regional Planning”, Concept Publishing Co., New Delhi
- NITI Ayog (2017): “Three Year Action Plan (2017-18 to 2019-20)”, NITI Ayog, New Delhi
- Tiwari, R. C. (2016): “Geography of India”, Pravalika Publications, Allahabad

Books for further reading:

- Bhargava, G. (2001): “Development of India’s Urban, Rural, and Regional Planning in 21st Century: Policy Perspective”, Gyan Publishing House, Delhi
- Datt, G. And Mahajan, A. (2016): “Datt and Sundaram’s Indian Economy”, S. Chand Publishing, New Delhi
- Devi, Laxmi (2000): “Planning Development and Regional Disparities”, (ed.) Anmol Publications, New Delhi
- Dhamdhere, S. and Shinde, S. (2010): “Bhartiya Ani Jagtik Arthik Vikas” (Marathi), Diamond Publications, Pune
- Hall, P. (2016): “Urban and Regional Planning” Routledge, London
- Knowles, R and Wareing, J. (1996): “Economic and Social Geography”, the Made Simple Series, Rupa& Co., Calcutta

- Sundaram, K. V. (1985): “Geography and Planning: Essays in Honour of Prof. V. L. S. PrakasaRao”, Concept Publishing Co., New Delhi
- Sundaram, K. V. (1989): “Regional Planning and Development: Essays on Space, Society, and Development in Honour of Professor R. P. Misra”, Heritage Publishers, New Delhi
- Vidyarthi, A. et al (2017): “Understanding India’s New Approach to Spatial Planning and Development: A Spatial Shift?”, Oxford University Press, New Delhi
- Yojana, Monthly Journal Published in English and Marathi by Government of Maharashtra

IMPORTANT WEBSITES / WEB LINKS:

mmrda.maharashtra.gov.in

niti.gov.in

planningcommission.gov.in

yojana.gov.in

QUESTION PAPER PATTERN:

Time: 3 hours		Marks; 100
N.B. 1. All questions are compulsory and carry equal marks. 2. Use of Map Stencils is permitted. 3. Draw sketches and diagrams wherever necessary.		
Q. 1	Long answer question on Unit-I	20 Marks
OR		
	Long answer question on unit –I for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 2	Long answer question on Unit-II	20 Marks
OR		
	Long answer question on unit –II for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 3	Long answer question on Unit-III	20 Marks
OR		
	Long answer question on unit –III for 20 Marks	20 Marks

	or Two short answer questions each 10 Marks	
Q. 4	Long answer question on Unit-IV	20 Marks
	OR	
	Long answer question on unit –IV for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 5	Long answer question on Unit-V	20 Marks
	OR	
	Long answer question on unit –V for 20 Marks or Two short answer questions each 10 Marks	20 Marks

University of Mumbai

Revised Syllabus w.e.f. Academic Year, 2018-19 (CBSGS) T.Y.B.A./T.Y.B.Sc. Geography, Semester – V, Paper – VIII - A

Subject Title: GEOGRAPHY OF RESOURCES

COURSE CODE: _____ (2018-19), **Credit:** 04

UNIT – I: Introduction to the Resources		TOTAL LECTURES
1.1	Meaning and importance of the natural resources	12
1.2	Factors influencing on resource utilization and related theories	
1.3	Classification of resources	
1.4	Issues with renewable and non-renewable resources	
UNIT – II: Natural resources: over exploitation and conservation measures		12
2.1	Over exploitation and depletion of natural resources	
2.2	Resource consumption pattern in the developed and underdeveloped countries	
2.3	Need and measures for resource conservation	
2.4	Sustainable use of natural resources	
UNIT – III: Natural Resources, Part –I		12
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	Deforestation and forest conservation	
UNIT – IV: Natural Resources Part –II		12
4.1	Soil composition and factor affecting soil formation	
4.2	Soil degradation and its conservation	
4.3	Minerals and their classification	
4.4	Use of energy minerals and their conservation	
UNIT – V: Human Resources		12
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	

Reference Books:

1. Chandna R.C. (2014): Geography of Population, Kalyani Publishers, Ludhiana, India
2. Gautam Alka (2010) Environmental Geography: Sharda Pustak Bhavan, Allahabad

3. GautamAlka: 2013: Advanced Economic Geography, Sharda Pustak Bhawan, Allahabad, India, Third Edition
4. Gautam Alka: Resource Geography, Sharda Pustak Bhawan, Allahabad, India,
5. Husain Majid, 2003: Resources Geography, Anmol Publications Pvt. Ltd. (2003)
ISBN: 9788170418764
6. Khullar D. R. (2014) India: A Comprehensive Geography, Kalyani Publishers, ISBN-13: 978-9327246759
7. Mondal P and Dalai (2017) Sustainable Utilization of Natural Resources: CRC Press (2017)
ISBN 9781498761833
8. Singh Savinder (2015): Environmental Geography: Prayag Pustak Company, Allahabad
9. Singh Vipul (2012) The Human Footprint on Environment: Issues in India, Macmillan Publishers India Pvt. Ltd, ISBN: 935-059-098-0
10. Verma C.L. (2014): Economic and Resource Geography, Forward Books; 1ST edition (2014)
ISBN-10: 9381763534
11. Website: https://www.researchgate.net/publication/280298490_Resource_Geography
12. William A.: Nonfuel Minerals and the World Economy", Vogely, World Resources Institute Book Yale University Press

QUESTION PAPER PATTERN:

Time: 3 hours	Marks; 100	
N.B. 1. All questions are compulsory and carry equal marks. 2. Use of Map Stencils is permitted. 3. Draw sketches and diagrams wherever necessary.		
Q. 1	Long answer question on Unit-I	20 Marks
OR		
	Long answer question on unit –I for 20 Marks or Two short answer questions each 10 Marks	20 Marks
OR		
Q. 2	Long answer question on Unit-II	20 Marks
	Long answer question on unit –II for 20 Marks or Two short answer questions each 10 Marks	20 Marks

Q. 3	Long answer question on Unit-III	20 Marks
	OR	
	Long answer question on unit –III for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 4	Long answer question on Unit-IV	20 Marks
	OR	
	Long answer question on unit –IV for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 5	Long answer question on Unit-V	20 Marks
	OR	
	Long answer question on unit –V for 20 Marks or Two short answer questions each 10 Marks	20 Marks

University of Mumbai

Revised Syllabus w.e.f. Academic Year, 2018-19 (CBSGS)

T.Y.B.A. / T.Y.B.Sc. Geography, Semester –V, Paper: VIII-B

Subject Title: GEOGRAPHY OF HEALTH

COURSE CODE: _____, Credit: 04__

Unit I - Introduction to Geography of Health		TOTAL LECTURES
1.1	Nature, scope and evolution geography of health	12
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	
Unit- II -The Pollution Syndrome		12
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	
Unit III - Geography of Diseases		12
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	
Unit IV -Health and Environment		12
4.1	Linkages of health with environment	
4.2	Relation between development and health	
4.3	Population dynamics, urbanisation, poverty and inequality	
4.4	Migration and related health issues	
Unit V - Health Care Facilities		12
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	

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

QUESTION PAPER PATTERN:

Time: 3 hours		Marks; 100
N.B. 1. All questions are compulsory and carry equal marks. 2. Use of Map Stencils is permitted. 3. Draw sketches and diagrams wherever necessary.		
Q. 1	Long answer question on Unit-I	20 Marks
OR		
	Long answer question on unit –I for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 2	Long answer question on Unit-II	20 Marks
OR		
	Long answer question on unit –II for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 3	Long answer question on Unit-III	20 Marks
OR		
	Long answer question on unit –III for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 4	Long answer question on Unit-IV	20 Marks
OR		
	Long answer question on unit –IV for 20 Marks or Two short answer questions each 10 Marks	20 Marks

Q. 5	Long answer question on Unit-V	20 Marks
OR		
	Long answer question on unit –V for 20 Marks or Two short answer questions each 10 Marks	20 Marks

University of Mumbai

Revised Syllabus w.e.f. Academic Year, 2018-19 (CBSGS)

T.Y.B.A. / T.Y.B.Sc. Geography, Semester – V, Paper: VIII-C

**Subject Title: GEOGRAPHY OF DISASTER MITIGATION and
MANAGEMENT**

COURSE CODE: _____, Credit: 04

UNIT – I, Meaning & Concept of Disaster & Hazard		No. of Lectures
1.1	Concepts of Disaster, Hazard, Vulnerability and Risks	12
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	
UNIT – II, Elements of Disaster Management		
2.1.	Disaster Management : Meaning & Concept	12
2.2.	Role of International Organisations for Disaster Management – UNISDR, INSARAG, Red Cross	
2.3	Role of National Organisations for Disaster Management	
2.4	Role of NGOs & Community in Disaster Management	
UNIT – III, Disaster Management : Methods & Approaches		
3.1	Disaster Management : Historical Perspective	12
3.2	Disaster Management : Methods & Approaches	
3.3	Pre- Disaster Stage of Management	
3.4	Post- Disaster Stage of Management	
UNIT- IV, Natural Disaster and its Management in India		
4.1	Earthquake & Tsunami –Causes, Effects, Management	12

4.2	Flood – Distribution, Causes, Effects , Management	
4.3	Cyclone – Distribution, Causes, Effects , Management	
4.4	Famine – Distribution, Causes, Effects , Management	
UNIT –V, Anthropogenic Disaster and its Management in India		
5.1	Industrial Hazards – Causes, effects and management with reference to Bhopal Gas Tragedy	12
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	

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
4. Murthy, D.B.N. (2008) : Disaster Management, Deep & Deep Publications Pvt. Ltd., New Delhi
5. Singh, Savindra and Singh, Jeetendra (2016) : Disaster Management, Pravalika Publications, Allahabad
6. गोडबोले, मराठे: आपत्ती व्यवस्थापन संकल्पना, डायमंड पब्लिकेशन्स, पुणे.
7. पठारे संभाजी, अजय चाकाने: आपत्ती निराकरण, डायमंड पब्लिकेशन्स, पुणे.
8. मोरे जोतीराम, अर्जुन मुसमाडे: आपत्ती व्यवस्थापनाचा भूगोल, डायमंड पब्लिकेशन्स, पुणे.

QUESTION PAPER PATTERN:

Time: 3 hours	Marks; 100	
N.B. 1. All questions are compulsory and carry equal marks. 2. Use of Map Stencils is permitted. 3. Draw sketches and diagrams wherever necessary.		
Q. 1	Long answer question on Unit-I	20 Marks
OR		
	Long answer question on unit –I for 20 Marks or Two short answer questions each 10 Marks	20 Marks
OR		
Q. 2	Long answer question on Unit-II	20 Marks
OR		
	Long answer question on unit –II for 20 Marks or Two short answer questions each 10 Marks	20 Marks
OR		
Q. 3	Long answer question on Unit-III	20 Marks
OR		
	Long answer question on unit –III for 20 Marks or Two short answer questions each 10 Marks	20 Marks
OR		
Q. 4	Long answer question on Unit-IV	20 Marks
OR		
	Long answer question on unit –IV for 20 Marks or Two short answer questions each 10 Marks	20 Marks
OR		
Q. 5	Long answer question on Unit-V	20 Marks
OR		
	Long answer question on unit –V for 20 Marks or Two short answer questions each 10 Marks	20 Marks

University of Mumbai
 Revised Syllabus w.e.f. Academic Year, 2018-19 (CBSGS)
 T.Y.B.A. / T.Y.B.Sc. Geography, Semester – V, Paper – IX
 Subject Title : GEOSPATIAL TECHNOLOGY

Course Code:

Credit-0 3

UNIT - I	Remote Sensing – I	9
1.1	Geospatial Technology: Concept, Components and Importance	
1.2	Remote Sensing: Concept, Process and Geographical Applications	
1.3	Electromagnetic Energy, EMR and EMS - 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	
UNIT - II	Remote Sensing – II	9
2.1	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	
UNIT - III	Global Positioning System	
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 Softwares like Easy GPS	
UNIT - IV	Geographic Information System – I	9
4.1	GIS : Concept, Components and Applications - Map Projection and Coordinate System	
4.2	GIS Data Acquisition and Types	
4.3	Importing Image into GIS Software and Geo-referencing	
4.4	Creating Layers by Digitization of Point, Line and Polygon Features	
UNIT V	Geographic Information System – II	9
5.1	Functions of Database Creation – Input, Editing and Linking	
5.2	Spatial Database Analysis: Overlay, Merge, Query	
5.3	Using Map-Composer for Map Layout and Design	
5.4	Preparation of Thematic Maps	

Paper – IX : GEOSPATIAL TECHNOLOGY Question Paper Pattern		
Q. 1	Unit –I	16
Q. 2	Unit –II	16
Q. 3	Unit –III	16
Q. 4	Unit –IV	16
Q. 5	Unit –V	16
Q. 6	Preparation Thematic Maps by using Geospatial Technology Tools	10
Q. 7	Journal and Viva	10

References:

1. कार्लेकर, श्रीकांत (२००६): भौगोलिक माहिती प्रणाली, डायमंड प्रकाशन, पुणे.
2. कार्लेकर, श्रीकांत (२०१२): दूर संवेदन, डायमंड प्रकाशन, पुणे.
3. Afzal Sharieff and et. al. (Ed.) (2010): An Introduction to Remote Sensing, SARUP Book Publishers Pvt. Limited, New Delhi.
4. Anson, R. W. and Ormeling, F. J., (Ed.) (1993): Basic Cartography for Students and Technicians, Vol.I, International Cartographic Association and Elseiver Applied Science Publishers, London.
5. American Society of Photogrammetry (1983): Manual of Remote Sensing, ASP PalisChurch,V.A.
6. Agrawal, N.K.(2006), Essentials of GPS (Second Edition), Book Selection Centre, Hyderabad
7. Bhatia (2016): Remote Sensing and GIS, Oxford University Press, New Delhi.
8. Bhatia, S. C. (2008): Fundamentals of Remote Sensing, Atlantic Publishers and Distributors (P) Limited, New Delhi.
9. Bhatta Basudeb 2016: Remote Sensing and GIS, Oxford University Press, New Delhi
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11. Bernhardsen, Tor (2002): Geographical Information Systems: An Introduction, Third Edition, John Wiiey& Sons, Inc., New York.
12. Burrough, Peter A and McDonnell, R.A. (1998): Principles of Geographical Information Systems, Oxford University Press, Mumbai.
13. Campbell. J. (1989): Introduction to Remote Sensing, Guilford, New York.
14. Clarke, Keith C. (1998): Getting Started with Geographic Information Systems, Prentice-Hall Series in Geogl. Info. Science, Prentice-Hall, Inc. N.J.
15. Central Board of Secondary Education (New Delhi): Geospatial Technology – Textbook, Class XI and XII

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17. Dickinson, G. C. (1977) Statistical Mapping and the Presentation of Statistics, Edward Arnold Ltd., London.
18. George B and Kolte P. E. (2010): The GIS Book, Cengage Learning India Private Limited, New Delhi.
19. George Joseph (2013): Fundamentals of Remote Sensing, Second Edition, Universities Press (India) Private Limited, Himayatnagar, Hyderabad.
20. Heywood, I. et al (2002): An Introduction to Geological Systems, Pearson Education Limited,
21. New Delhi.
22. Iliffe, J.C (2006), Datums and Map Projections for Remote Sensing, GIS and Surveying, Whittles Publishing, New York.
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24. Kang-Tsang Chang (2010): Introduction to Geographic Information Systems, Tata McGraw Hill Edition, New Delhi.
25. Lillesand and Keifer (2010) Remote Sensing and Image Interpretation, Fourth Edition, Wiley.
26. Pearson Education Series in Geographical Information Science, Keith C. Clarke (Series editor) Pearson Educators Private Limited. (Singapore), New Delhi.
27. Monkhouse, F. J. and H. R. Wilkinson, (1971): Maps and Diagrams, Methuen & Co. Ltd., London.
28. Robinson, A. H. and Others (1995): Elements of Cartography, VI Edition, John Wiley & Sons, New York.
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31. Training Module of Capacity Building Training Programme in Geospatial Technology sponsored by Department of Science and Technology, Government of India in collaboration of Himachal Pradesh University.
32. Tutorials from the - <http://dst-iget.in/tutorials>
33. bhuvan.nrsc.gov.in/
34. <https://www.isro.gov.in>
35. <https://www.iirs.gov.in/>

SEMESTER – VI

University of Mumbai

Revised Syllabus w.e.f. Academic Year, 2018-19 (CBSGS)

T.Y.B.A. / T.Y.B.Sc. Geography, Semester – VI, Paper: IV

Subject Title: ENVIRONMENTAL GEOGRAPHY

COURSE CODE: _____ 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, Factors and Types	
	1.3	Approaches to the Study of Man – Environment Relationship	
	1.4	Changing Man - Environment Relationship in 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 Western Ghats	
	3.3	Threat to Biodiversity: Causes	
	3.4	Conservation of Biodiversity and Management of Biological Reserves	
UNIT-IV	Environmental Challenges in India		12
	4.1	Air pollution and Water Pollution: Cases and Effects	
	4.2	Land and Noise Pollution: Cases and Effects	
	4.3	Environmental Issues Related to High/large Dams	
	4.4	Major environmental Movements in India	
UNIT-V	Sustainable Development and Environmental Management		

	5.1	Concepts and Need of Sustainable Development and Environmental Management	12
	5.2	Eco-friendly Lifestyle and Need of Environmental Education	
	5.3	Biosphere Reserves and Wildlife Management in India	
	5.4	Environmental Impact Assessment	

Reference book:

- Bharucha, E. (2004): “A Textbook for Environmental Studies”, University Grants Commission, New Delhi, Downloaded from <https://www.ugc.ac.in/oldpdf/modelcurriculum/env.pdf>
- Cunningham, W, and Cunnigham, M. (2017): “Principles of Environmental Science: Inquiry and Applications”, McGraw Hill Education, Delhi
- Gautam, A. (2010): “Environmental Geography”, Sharda Pustak Bhavan, Allahabad
- Karlekar, S. and Borges, J. (2008): “Diamond Bhugol- Paryavaran Shatra Kosh”, (Marathi), Diamond Publications, Pune
- Rajagopalan, R. (2016): “Environmental Studies: From Crisis to Core”, Oxford University Press, New Delhi
- Sangle, S. (2017): “Paryavaran Bhugol”, (Marathi), Diamond Publications, Pune
- Saxena, H. (2017): “Environmental Geography”, Rawat Publishers, Jaipur.
- Singh, S. (2017): “Environmental Geography”, Prayag Pustak Bhawan, Allahabad
- Parmar and other – “Pryavaran Bhugol” Himalaya Publishing House – Mumbai 2013
- Thakur and other - – “Pryavaran Bhugol” Konkan Geographer’s Publication

QUESTION PAPER PATTERN:

Time: 3 hours	Marks; 100	
N.B. 1. All questions are compulsory and carry equal marks. 2. Use of Map Stencils is permitted. 3. Draw sketches and diagrams wherever necessary.		
Q. 1	Long answer question on Unit-I	20 Marks
OR		
	Long answer question on unit –I for 20 Marks or Two short answer questions each 10 Marks	20 Marks
OR		
Q. 2	Long answer question on Unit-II	20 Marks
OR		
	Long answer question on unit –II for 20 Marks or Two short answer questions each 10 Marks	20 Marks
OR		
Q. 3	Long answer question on Unit-III	20 Marks
OR		
	Long answer question on unit –III for 20 Marks or Two short answer questions each 10 Marks	20 Marks
OR		
Q. 4	Long answer question on Unit-IV	20 Marks
OR		
	Long answer question on unit –IV for 20 Marks or Two short answer questions each 10 Marks	20 Marks
OR		
Q. 5	Long answer question on Unit-V	20 Marks
OR		
	Long answer question on unit –V for 20 Marks or Two short answer questions each 10 Marks	20 Marks

University of Mumbai
Revised Syllabus w.e.f. Academic Year, 2018-19 (CBSGS)
T.Y.B.A. / T.Y.B.Sc. Geography, Semester – VI
Paper No. – V -A
GEOGRAPHY OF TOURISM and RECREATION

COURSE CODE: _____, Credit: __04__

Unit-I -Introduction to Tourism Geography		TOTAL LECTURES
1.1	Definition , Nature and Scope	12
1.2	Trends of Tourism Development in World	
1.3	Factors of Tourism Development - Geographical components	
1.4	Factors of Tourism Development - Socio-cultural and political	
Unit-II Types & Impact of Tourism		12
2.1	Types of Tourism,	
2.2	New Trends in Tourism,	
2.3	Positive impact of Tourism on Environment, Socio-culture and Economy	
2.4	Negative Impact of Tourism on Environment, Socio-culture and Economy	
Unit-III - Infrastructure of Tourism and Ancillary Services		12
3.1	Accommodation	
3.2	Transportation	
3.3	Travel Agencies and Tour Guide	
3.4	Documentation and Ticketing	
Unit-IV - Planning of Tourism and Organisation		12
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	
Unit-V Potential Tourism Sectors in Maharashtra and Tourism Policy		12
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	

• **Reference Books**

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
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5. Geetanjali, Tourism Geography, Centrum press publishers, New Delhi
6. T.K. Sathyadev, P. Manjunath- Tourism Planning, Pacific books Internationals, Delhi.
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8. चारपुरे ,विठ्ठल) २०१०:(पर्यटन भूगोल ,पिंपळापुरेआणिप्रकाशक ,नागपूर.

QUESTION PAPER PATTERN:

Time: 3 hours		Marks; 100
N.B. 1. All questions are compulsory and carry equal marks. 2. Use of Map Stencils is permitted. 3. Draw sketches and diagrams wherever necessary.		
Q. 1	Long answer question on Unit-I	20 Marks
OR		
	Long answer question on unit –I for 20 Marks or Two short answer questions each 10 Marks	20 Marks
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Q. 2	Long answer question on Unit-II	20 Marks
OR		
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OR		
Q. 3	Long answer question on Unit-III	20 Marks
OR		
	Long answer question on unit –III for 20 Marks or Two short answer questions each 10 Marks	20 Marks
OR		
Q. 4	Long answer question on Unit-IV	20 Marks
OR		
	Long answer question on unit –IV for 20 Marks or	20 Marks

	Two short answer questions each 10 Marks	
Q. 5	Long answer question on Unit-V	20 Marks
OR		
	Long answer question on unit –V for 20 Marks or Two short answer questions each 10 Marks	20 Marks

UNIVERSITY OF MUMBAI

Syllabus for T.Y.B.A. Geography

(CBSGS with effect from Academic Year 2018-19)

SEMESTER-VI, Paper No. V -B

Subject Title: **POLITICAL GEOGRAPHY**

COURSE CODE: _____ (2018-19), Credit: 04

Units	Name of the Unit/Subunit	No of Lectures
Unit – 1. : Introduction of Political Geography		(12)
1.1	Definition, Nature and Scope of Political Geography	
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	
Unit – 2. : Approaches and Concepts in Political Geography		(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	
Unit – 3. : Frontiers and Boundaries		(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	
Unit – 4. : Geostrategic and Geopolitical Views		(12)

4.1	Mackinder's Heartland and Spykman's Rimland Model	
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	
Unit – 5. : Electoral Geography		(12)
5.1	Concept, Nature and Approaches of Electoral Geography	
5.2	Geography of Voting: Geographical Factors Affecting Elections	
5.3	Spatial Organisation of Electoral Areas and Geography of Representation	
5.4	Challenges to Election System in India	

Reference Books:

- Adhikari, S. (2015): "Political Geography", Rawat Publications, Jaipur
- Adhikari, S. (2011): "Political Geography of India: A Contemporary Perspective", Sharda Pustak Bhawan, Allahabad
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- Dikshit, S. (1993): "Electoral Geography of India", Vishwavidyalaya Prakashan, Varanasi
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- धारपुरेविठुल (२०१३)राजकीयभूगोल, पिंपळापुरेअँडकं.,नागपूर
- लाटकर, आपटे (१९९८)राजकीयभूगोल, विद्याप्रकाशन, नागपूर
- पाटीलविलास (२०१५)राजकीयभूगोल, प्रशांतपब्लिकेशन, जळगाव

QUESTION PAPER PATTERN:

Time: 3 hours	Marks; 100	
N.B. 1. All questions are compulsory and carry equal marks. 2. Use of Map Stencils is permitted. 3. Draw sketches and diagrams wherever necessary.		
Q. 1	Long answer question on Unit-I	20 Marks
OR		
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OR		
Q. 4	Long answer question on Unit-IV	20 Marks
OR		
	Long answer question on unit –IV for 20 Marks or Two short answer questions each 10 Marks	20 Marks
OR		
Q. 5	Long answer question on Unit-V	20 Marks
OR		
	Long answer question on unit –V for 20 Marks or Two short answer questions each 10 Marks	20 Marks

University of Mumbai

Revised Syllabus w.e.f. Academic Year, 2018-19 (CBSGS)

T.Y.B.A. / T.Y.B.Sc. Geography, Semester –VI, Paper No: VI

**Subject Title: TOOLS AND TECHNIQUES IN GEOGRAPHY FOR
SPATIAL ANALYSIS-II (Practical)**

COURSE CODE: _____, Credit: __03__

Unit -I	Nature of data and central tendency	Lectures
	1.1. Meaning and types of data, variable, observation, observation value, simple, discrete data and continuous data	09
	1.2. Frequency Distribution, Histogram, Frequency Polygon and Ogive	
	1.3. Measures of Central Tendency- mean, median and mode	
Unit -II	Dispersion and Deviation	
	2.1. Mean Deviation and Quartile Deviation	09
	2.2. Standard Deviation	
	2.3. Moving Averages (3 years and 5 years)	
Unit -III	Correlation, Regression & Hypothesis Testing	
	3.1. Calculation of correlation coefficient - Pearson's and Spearman's methods	09
	3.2. Regression analysis	
	3.3. Chi square test	
Unit-IV	Sampling	
	4.1. Sample and sample design in geography	09
	4.2. Point sampling – Systematic and random	
	4.3. Line sampling – Systematic and random	
	4.4. Area sampling – Systematic and random	
Unit-V	Field work in Geography of any one place/village	09
	5.1. Collection of physiographic data – Field observation, field sketching, collection of soil and rock samples, identification of vegetation etc.	
	5.2. Collection of socio-economic data – interviews, questionnaire survey, visit to local governing office, NGO's etc.	
	5.3. Collection of geospatial data – toposheets, aerial photographs, Google images/maps, Bhuvan images etc.	
	To prepare a geographical report of a place with the help of an available 5.1, 5.2, and 5.3 aspects	

References -

- Ahirrao ani Karanjkehe – प्रात्यक्षिक भूगोल,
- Karlekar Shrikant- प्रात्यक्षिक भूगोल, डायमंड पब्लिकेशन्स
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- Monkhouse F.J. - Maps & Diagrams, Methuen and Co., London, 1971 (3rd Edition, Revised).
- NCERT - Textbook for Class-12, Practical Work in Geography Part II
- Peter A. Rogerson - Statistical Methods for Geography, Sege Publishers -2001
- Robinson A.H. - Elements of Cartography, Wiley
- Sarkar Ashis - Practical Geography, Orient Black Swan – 2015
- Sarkar Ashis –Quantitative Geography, Orient Black Swan – 2013
- Singh R.L. & Singh P. B. - Elements of Practical Geography, Kalyani Publishers 2005
- Stoddard Robert – Field techniques and research methods in geography, Geography faculty publication <http://digitalcommons.unl.edu/geographyfacpub/26>

QUESTION PAPER PATTERN

(SEM - VI)

MARKS: - 100 TIME: 4 HRS

N.B:

4. All questions are compulsory.
5. Figures to the right indicate marks to a sub-question.
6. Use of map stencils and simple calculator is allowed.

Q. 1	Unit-I	16 Marks
Q. 2	Unit-II	16 Marks
Q. 3	Unit-III	16 Marks
Q. 4	Unit-IV	16 Marks
Q. 5	Unit-V	16 Marks
Q. 6	Journal and Viva	20 Marks

University of Mumbai

Revised Syllabus w.e.f. Academic Year, 2018-19 (CBSGS)

T.Y.B.A. / T.Y.B.Sc. Geography, Semester – VI, Paper – VII

Subject Title: ECONOMIC GEOGRAPHY

COURSE CODE: _____ (2018-19), Credit: 04

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

Reference Books:

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13. अहिरराव, धापटे, पाटील, शिंदे (१९९७): आर्थिक भूगोल, निराली प्रकाशन, पुणे
14. एस. ए. ठाकूर, आर. बी. पाटील, पेडणेकर, धुरी(२०१२) : आर्थिक भूगोल, कोकण जोग्रफर्स असोसिएशन
15. खतीब (२००७): आर्थिक भूगोल, मेहता पब्लिशिंग हाउस, कोल्हापूर
16. फुले, शिंदे, पवार, अडसूळ, पाटील (१९९८): आर्थिक भूगोल, सप्रेमप्रकाशन, कोल्हापूर
17. विठ्ठल चारपुरे (२०१३): आर्थिक भूगोल, पिंपळापुरे अंड पब्लिशर्स, नागपूर.
18. शिंदे, केंगारे, माने-देशमुख (१९९९): आर्थिक भूगोल, फडके प्रकाशन, कोल्हापूर
19. सवदी, कोळेकर (२०१०): अभिनव भूगोल : , निराली प्रकाशन, पुणे

QUESTION PAPER PATTERN:

Time: 3 hours	Marks; 100	
N.B. 1. All questions are compulsory and carry equal marks. 2. Use of Map Stencils is permitted. 3. Draw sketches and diagrams wherever necessary.		
Q. 1	Long answer question on Unit-I	20 Marks
OR		
	Long answer question on unit –I for 20 Marks or Two short answer questions each 10 Marks	20 Marks
OR		
Q. 2	Long answer question on Unit-II	20 Marks
OR		
	Long answer question on unit –II for 20 Marks or Two short answer questions each 10 Marks	20 Marks
OR		
Q. 3	Long answer question on Unit-III	20 Marks
OR		
	Long answer question on unit –III for 20 Marks or Two short answer questions each 10 Marks	20 Marks
OR		
Q. 4	Long answer question on Unit-IV	20 Marks
OR		
	Long answer question on unit –IV for 20 Marks or Two short answer questions each 10 Marks	20 Marks
OR		
Q. 5	Long answer question on Unit-V	20 Marks
OR		
	Long answer question on unit –V for 20 Marks or Two short answer questions each 10 Marks	20 Marks

University of Mumbai

Revised Syllabus w.e.f. Academic Year, 2018-19 (CBSGS)

T.Y.B.A./T.Y.B.Sc. Geography, Semester –VI, Paper: VIII – A

Subject Title: BIOGEOGRAPHY

COURSE CODE: _____, Credit: __04__

Unit-I: Introduction to Biogeography		TOTAL LECTURES
1.1.	Biogeography-Concept, definition, nature and scope	12
1.2.	Historical development and branches of Biogeography	
1.3.	Approaches in Biogeography	
1.4.	Importance of Biogeographic studies	
Unit-II: Ecosystem and Biosphere		
2.1.	Ecosystem: Concept, meaning and types	12
2.2.	Components of ecosystem and ecosystem productivity	
2.3.	Biosphere: Concept, meaning and components	
2.4.	Biogeographic processes	
Unit -III: Plant Community		
3.1.	Concept of plant community and classification of plants	12
3.2.	Biotic succession and climax vegetation	
3.3.	Major plant formation and biomes- Tropical	
3.4.	Major plant formation and biomes- Temperate	
Unit –IV: Marine Biogeography		
4.1.	Marine Biogeography meaning and concept	12
4.2.	Types of ocean habitats	
4.3.	Biogeography of estuaries	
4.4.	Island biogeography	
Unit-V: Biodiversity		
5.1.	Meaning and types of Biodiversity	12
5.2.	Importance of Biodiversity	
5.3.	Causes of Biodiversity loss	
5.4.	Biodiversity conservation	

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QUESTION PAPER PATTERN:

Time: 3 hours		Marks; 100
N.B. 1. All questions are compulsory and carry equal marks. 2. Use of Map Stencils is permitted. 3. Draw sketches and diagrams wherever necessary.		
Q. 1	Long answer question on Unit-I	20 Marks
OR		
	Long answer question on unit –I for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 2	Long answer question on Unit-II	20 Marks
OR		
	Long answer question on unit –II for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 3	Long answer question on Unit-III	20 Marks
OR		
	Long answer question on unit –III for 20 Marks	20 Marks

	or Two short answer questions each 10 Marks	
Q. 4	Long answer question on Unit-IV	20 Marks
	OR	
	Long answer question on unit –IV for 20 Marks or Two short answer questions each 10 Marks	20 Marks
Q. 5	Long answer question on Unit-V	20 Marks
	OR	
	Long answer question on unit –V for 20 Marks or Two short answer questions each 10 Marks	20 Marks

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Revised Syllabus w.e.f. Academic Year, 2018-19 (CBSGS)

T.Y.B.A. / T.Y.B.Sc. Geography, Semester – VI, Paper – VIII-B:

Subject Title: SOCIAL GEOGRAPHY

COURSE CODE: _____ (2018-19), Credit: __04__

UNIT – I: Introduction to Social Geography		TOTAL LECTURES
1.1	Social Geography: Definitions, Nature, Scope and importance	12
1.2	Branches and Approaches in Social Geography	
1.3	Concept of Social Space and Socio-cultural Regions	
1.4	Globalisation: The Process of Social and Spatial Change	
UNIT – II: Elements of Social Geography -World		12
2.1	Race: Concept and Basis of Classification and distribution	
2.2	Religion: Characteristics, Distribution and Spread of Major Religions in the World	
2.3	Language: Characteristics and Distribution of Major Linguistic Families in the World	
2.4	Tribes: Concept, Characteristics and Patterns of Distribution of Major Tribes in the World	

UNIT – III: : Elements of Social Geography –India		
3.1	Race: Major races and its distribution in India	12
3.2	Religion: Major Religions and its distribution and its distribution in India	
3.3	Language: Major Linguistic Families in India	
3.4	Tribes: Distribution of Scheduled Tribes in India	
UNIT - IV: Social Geography of City		
4.1	Social groups – identification and distribution	12
4.2	Residential segregation	
4.3	Functional segregation	
4.4	Social issues in the city	
UNIT – V: Contemporary Issues in India		
5.1	Religion related social issues	12
5.2	Language related social issues	
5.3	Patterns of gender issues in India	
5.4	Socio-economic problems of indigenous communities in India	

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- www.nptel.ac.in/courses/109103022/40

QUESTION PAPER PATTERN:

Time: 3 hours		Marks; 100
N.B. 1. All questions are compulsory and carry equal marks. 2. Use of Map Stencils is permitted. 3. Draw sketches and diagrams wherever necessary.		
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	Long answer question on unit –IV for 20 Marks or Two short answer questions each 10 Marks	20 Marks
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	OR	
	Long answer question on unit –V for 20 Marks or Two short answer questions each 10 Marks	20 Marks

University of Mumbai

Revised Syllabus w.e.f. Academic Year, 2018-19 (CBSGS)

T.Y.B.A. / T.Y.B.Sc. Geography, Semester – VI, Paper: VIII-C

Subject Title: GEOGRAPHY OF TRANSPORT

COURSE CODE: _____, Credit: _04_

Unit-I : Introduction to Transport Geography		TOTAL LECTURES
1.1	Concept and Definition of Geography of Transport	12
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	

Unit-II – Transport net work system		
2.1	Transport net work system – structure and properties	12
2.2	Application of graph theory measures	
2.3	Location of routes and efficiency of network	
2.4	Conflicting aspects of decision making	
Unit-III : Evolution of Modes of Transport		
3.1	Evolution of transport network and their environment	12
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	
Unit-IV : Theoretical Framework of Transport		
4.1	Connectivity and its Measurement	12
4.2	Accessibility and its Measurement	
4.3	Taffe’s model	
4.4	Gravity model	
Unit-V: Transportation Issues in India		
5.1	Issues associated with roadways transport network	12
5.2	Issues associated with railways transport network	
5.3	Issues associated with water transport development	
5.4	Issues associated with air transport development	

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2. Hagget, F and Chorley, R.J. Network Analysis’, Edward Arnold, London, 1968.
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	or Two short answer questions each 10 Marks	
Q. 5	Long answer question on Unit-V	20 Marks
	OR	
	Long answer question on unit –V for 20 Marks or Two short answer questions each 10 Marks	20 Marks

	<p align="center">University of Mumbai Revised Syllabus w.e.f. Academic Year, 2018-19 (CBSGS) T.Y.B.A. / T.Y.B.Sc. Geography, Semester – VI, Paper – IX : PROJECT REPORT Course Code: Credits: 03</p>	
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