

UNIVERSITY OF MUMBAI
Proposed Syllabus for F.Y.B.A. course in the subject of Geography
(With effect from the academic year 2016-17)

Paper – I:
Geomorphology
Credits - 04
SEMESTER-I
COURSE CODE: UAGEO101

Unit I: Interior of the Earth (12)

Definition & meaning of Geomorphology - Composition and Structure of the Interior of the Earth - Rocks and Minerals - Wegner's Continental Drift Theory - Theory of Plate Tectonics

Unit II: Endogenic Processes (12)

Movements of the Earth's Crust - Diastrophic Movements: Folding and Faulting - Catastrophic Movements: Volcanoes and Earthquakes - Examples from the World and India

Unit III Exogenic Processes- I (12)

Weathering, Erosion and Mass Wasting - Fluvial and Glacial Landforms (Erosional and Depositional)

Unit IV Exogenic Processes - II (12)

Aeolian Landforms - Coastal Landforms - Karst Landforms (Erosional and Depositional)

Unit V Practical (12)

Concept of Contours - Calculation of gradient (with H.E. and V.I.) - Drawing of sections to depict Contour Landforms - Intervisibility

REFERENCES:

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

UNIVERSITY OF MUMBAI
Proposed Syllabus for F.Y.B.A. course in the subject of Geography
(With effect from the academic year 2016-17)

Paper – I: Human Geography

Credits - 04

SEMESTER-II

COURSE CODE: UAGEO102

Unit I: Introduction to Human Geography (12)

Meaning, Nature and Scope of Human Geography - Branches of Human Geography - Different approaches to Human Geography - Man-Environment relationship: Determinism, Possibilism, Probabilism

Unit II: Settlements (12)

Concept of Urban and Rural Settlements – Types & Patterns of Settlements – Site and Situation – Functional classification of Urban Settlements

Unit III Population (12)

Trends and Patterns of World population change - Demographic Transition Model - Population Distribution: Factors and Patterns –Concept and Problems of Under-population, over-population and optimum population

Unit IV Migration (12)

Concept and Types of Migration - Causes of Migration: Push and Pull Factors - Consequences of Migration: Source and Destination Areas - Recent Trends in International Migration – Migration Theories: Lee's Theory of Migration & Reilly's Gravity Model

Unit V Practical (12)

Nearest Neighbour Analysis – Construction and Interpretation of Age-Sex Pyramids – Construction and interpretation of Flow Diagrams

REFERENCES:

1. Johnson R. J. & Others (1983) : The Dictionary 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

University of Mumbai
Revised Syllabus w.e.f. Academic Year, 2017-18 (CBSGS)
S.Y.B.A. Geography - Semester- III
Paper-III: Physical Geography of India
COURSE CODE: UAGEO 302 (2017-18), Credit - 3

Unit-I: Introduction of India		09 (lectures)
1.1	India: Location , extent and significance	
1.2	India: Major physiographic divisions and their formation	
1.3	Mountainous region of India	
1.4	North Indian plains	
1.5	Peninsular plateau of India	
1.6	Coastal plains and islands of India	
Unit-II: Drainage and Climate		09 (lectures)
2.1	Drainage System in India (Himalayan and Peninsular drainage system)	
2.2	Major Himalayan rivers of India	
2.3	Major Peninsular Rivers of India	
2.4	Major lakes of India	
2.5	Seasons in India	
2.6	Distribution of rainfall in India	
Unit-III: Soils and Natural Vegetation		09 (lectures)
3.1	Classification of soils of India	
3.2	Problems associated with soils and its remedies in India	
3.3	Classification of Forest in India	
3.4	Importance of Forest in Indian context	
3.5	Deforestation and measures of forests conservation in India	
Unit-IV: Mineral and Power Resources		09 (lectures)

4.1	Distribution of Metallic Minerals in India: Iron ore, manganese, bauxite, copper and other important minerals	
4.2	Distribution of Non-Metallic Minerals in India: Mica, limestone, gypsum, clay and other important minerals	
4.3	Distribution of Power Resources : Coal, mineral oil and natural gas, thorium and uranium	
4.4	Depletion and conservation of minerals and power resources in India	
Unit-V: Practical Component		09 (lectures)
5.1	Map filling: Showing geographical features in the Map of India (Related to physiography)	
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 University 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, Bangladesh 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. Shinde P. ; Pednekar H. et.al. (2010): Introduction to Geography, Sheth Publishers Pvt.Ltd., Mumbai.
12. Shinde P. ; Pednekar H. et.al. (2011): Economic Geography of India, SYBA paper II Sheth Publishers , Pvt.Ltd., Mumbai
13. Singh, R.L. (1971): India-A Regional Geography, National Geographical Society of India, Varanasi.
14. Tirth, R (1996): Geography of India, Rawat Publications, Jaipur.
15. Majid Hussain (2014, 5th edition): Geography of India, McGraw Hill Education (India) Private Ltd, Uttar Pradesh..

University of Mumbai
Revised Syllabus w.e.f. Academic Year, 2017-18 (CBSGS)
S.Y.B.A. Geography, Semester- III
Paper-II: An Introduction to Climatology
COURSE CODE: UAGEO 301 (2017-18), Credit - 3

Unit-I: Introduction to Climatology		09 (lectures)
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	
Unit-II : Air Pressure and Atmospheric Circulation		09 (lectures)
2.1	Air pressure: Influencing factors – Tricellular model	
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)	
Unit-III: Humidity and Precipitation		09 (lectures)
3.1	Humidity: Types - absolute, relative and specific	
3.2	Condensation and its forms	
3.3	Precipitation and its types	
3.4	Global distribution of rainfall	
Unit-IV: Climate and Weather Phenomena		09 (lectures)
4.1	Cyclones: tropical and temperate	
4.2	Anti-cyclones and tornados	
4.3	El Nino and Indian monsoon	
4.4	Global warming and climate change	
Unit-V: Practical Component		09 (lectures)
5.1	IMD: Weather signs and symbols, 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, 5th edition, (International Student Edition)
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University of Mumbai
Revised Syllabus w.e.f. Academic Year, 2017-18 (CBSGS)
S.Y.B.A. Geography, Semester- IV
Paper-II: Introduction to Oceanography
COURSE CODE: UAGEO 402 (2017-18), Credit - 3

Unit-I: Nature of Oceanography		09 (lectures)
1.1	Origin and Development of Oceanography	
1.2	Oceanography : meaning, definition, nature and scope	
1.3	Branches of oceanography: physical chemical and biological	
1.4	Major Oceans and its characteristic features	
Unit-II: Bottom Relief and Ocean Water		09 (lectures)
2.1	Ocean floor and its characteristics	
2.2	Composition of ocean water	
2.3	Factors affecting ocean water temperature	
2.4	Vertical and horizontal distribution of ocean temperature	
2.5	Factors affecting salinity of ocean water	
2.6	Vertical and horizontal distribution of oceanic salinity	
Unit-III: Movements of Ocean Water		09 (lectures)
3.1	Waves- Formation and types	
3.2	Tsunami and their effects on coast	
3.3	Concept and types of Tides	
3.4	Equilibrium theory of Tides	
3.5	Ocean Currents – types and their effects	
Unit-IV: Man and Ocean		09 (lectures)
4.1	El- Niño and La-Niña phenomenon	
4.2	Coral reefs and their importance	
4.3	Marine Ecosystem	
4.4	Marine pollution	
4.5	Oceans and global climate change	
Unit-V: Practical Component		09 (lectures)
5.1	Map filling : Related to Oceanography	
5.2	Reading and Interpretation of navigation charts and bathymetric maps	

Reference books:-

1. Bhatt, J.J. 1978): Exploring the Planet Ocean, D.Von Nostrand Co.New York.
2. Birla Economic Research Foundation, economic Research Division 1992): The Oceans, Allied Publishers Ltd. New Delhi.
3. Chandra, S. and Others (eds).(1993): The Indian Ocean and its islands: Strategic Scientific and Historical perspectives, sage Publications, New Delhi.
4. Chawan S.V. (ed) (2015): Physical Geography, Paper I, Published by Director (I/C), Institute of Distance and Open Learning, University of Mumbai.
5. Fairbridge, R.W.ed) Encyclopedias 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.

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Revised Syllabus w.e.f. Academic Year, 2017-18 (CBSGS)
S.Y.B.A./ S.Y.B.Sc. Geography, Semester- IV
Paper-III: Agriculture Geography of India
COURSE CODE: UAGEO401 (2017-18) Credit - 3

Unit-I: Introduction to Agricultural Geography		09 (lectures)
1.1	Definition, nature and scope of agricultural geography	
1.2	Approaches: regional approach, systematic approach, commodity approach, recent approaches	
1.3	Importance of agriculture in Indian economy	
1.4	Factors influencing agriculture in India	
1.5	India a agro-product exporting country	
Unit-II: Introduction to Indian Agriculture		09 (lectures)
2.1	Salient features of Indian agriculture	
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)	
Unit-III: Green Revolution in India		09 (lectures)
3.1	Introduction of Green Revolution in India	
3.2	Components of Green Revolution	
3.3	Positive impacts of Green Revolution	
3.4	Negative impacts of Green Revolution	
3.5	Need for sustainable agriculture in India	
3.6	Agriculture in drought prone region and watershed management	
Unit-IV: Recent Trends in Agriculture		09 (lectures)
4.1	White revolution and livestock resources,	
4.2	Genetic engineering, tissue culture and horticulture	
4.3	Poly house agriculture	
4.4	Agro processing in India	
4.5	Agro-tourism	
4.6	Agro forestry	
Unit- V		

Practical Component		09 (lectures)
5.1	Interpretation/ question- answer on thematic maps related to agriculture of India (NATMO and other)	
5.2	Drawing of Statistical Diagrams and Graphs: Simple line graphs, multiple line, simple bar, compound bar and band graph	

Reference books:-

1. Bansil, B. C. (1975): 'Agricultural Problems of India', Delhi.
2. Bayliss Smith, T.P. (1987) : The Ecology of Agricultural Systems. Cambridge University Press, London .
3. Berry, B.J.L. et. al.(1976) : The Geography of Economic Systems. Prentice Hall, New York.
4. Gregor, H.P.: Geography of Agriculture. Prentice Hall, New York, 1970.
5. Grigg, D. (1984): 'An Introduction to Agricultural Geography', Hutchinson Publication, London
6. Grigg, D.B.(1974) : The Agricultural Systems of the World. Cambridge University Press, New York.
7. Hartshorn, T.N. and Alexander, J.W. (1988): Economic Geography. Prentice Hall, New Delhi.
8. Morgan W.B. and Norton, R.J.C. (1971): Agricultural Geography. 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

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 व र (१९९९) वस्तु भूगोल, पलपुरे अँड कं., नागपूर

- शाळित ढरकाळ (१९९ॢ) नागरी भूगोल, फडके ढरकाळन, कोल्षाढरू
- शळदी ँ,बी. (२०१०) नागरी भूगोल, ननरारी ढरकाळन, ढुणे

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.शळदी: मषारारभगोर
- देळपांिडेएशएश: मषारारचैअथळस
- मषारारचाभगोर - प्रा.शी.डीदळपांिडे
- मषारार- शळदीआ णके चे
- मषारारचाभगोर - बी.अरूणाचरम
- मषारार 2006 - शिंतोवदास्ताने
- जनगणनाऑटरश – मषारारशरकार
- मषारारचैनकाळे-डॉ.के.आरदद सत
- मषारारतीरजरशिंपदा- प्रा. डॉ.एश.बी.ढमढेरे
- मषारारतीरनद्या – श्रीकांिततापीकर
- मषारारचाभगोर – डॉ.शुरेळफु रे

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-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	Leibenstein'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

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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 No: VI

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

COURSE CODE: _____, Credit: __03__

Unit -I	Map Projections	Lectures
	1.1. Basic Concepts – Definition, scale, direction, azimuth, graticule, great circle, true meridian, types of projections, choice of projections	09
	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	
	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	
	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)	
	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	
	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 – प्रात्य सक भ ोर,
- Karlekar Shrikant- प्रात्य सक भ ोर, डायमिंड पब्लरके कन्श
- KarlekarShrikant- Bhoogol shastratil Sanshodhan Paddhati, डायमिंड पब्लरके कन्श
- 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. - प्रात्य सक भग

N.B:

ोर, Konkan Geographer's publication (2016)

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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
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- 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

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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 – 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,
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ISBN: 9788170418764
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7. Mondal P and Dalai (2017) Sustainable Utilization of Natural Resources: CRC Press (2017)
ISBN 9781498761833
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9. Singh Vipul (2012) The Human Footprint on Environment: Issues in India, Macmillan Publishers India Pvt. Ltd, ISBN: 935-059-098-0
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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
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-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 ब्रकरण, डायमंड पब्लिकेशन्स, पुणे.
8. मोरे जोतीराम, अजुन 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
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Q. 3	Long answer question on Unit-III	20 Marks
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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 – 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. कार्केकर, श्रीकांत (२००६): भौगोलिक मापसूत्री प्रणाली, डायमिंड प्रकाशन, पुणे.
2. कार्केकर, श्रीकांत (२०१२): दूर शिक्लेदन, डायमिंड प्रकाशन, पुणे.
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4. Anson, R. W. and Ormeling, F. J., (Ed.) (1993): Basic Cartography for Students and Technicians, Vol.I, International Cartographic Association and Elsevier Applied Science Publishers, London.
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6. Agrawal, N.K.(2006), Essentials of GPS (Second Edition), Book Selection Centre, Hyderabad
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13. Campbell. J. (1989): Introduction to Remote Sensing, Guilford, New York.
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15. Central Board of Secondary Education (New Delhi): Geospatial Technology – Textbook, Class XI and XII

16. Chaisman, N. 1992: Exploring Geographical Information Systems, John Wiley and Sons Inc., New York. Lillesand, T.M. and Kiefer, R. W. 1994: Remote Sensing and Image Interpretation, 3rd edition, John Wiley and Sons, New York.
17. Dickinson, G. C. (1977) Statistical Mapping and the Presentation of Statistics, Edward Arnold Ltd., London.
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19. George Joseph (2013): Fundamentals of Remote Sensing, Second Edition, Universities Press (India) Private Limited, Himayatnagar, Hyderabad.
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21. New Delhi.
22. Iliffe, J.C (2006), Datums and Map Projections for Remote Sensing, GIS and Surveying, Whittles Publishing, New York.
23. Jonson. R. J. (2003): Remote Sensing of the Environment-An Earth Resources Perspective
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.
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27. Monkhouse, F. J. and H. R. Wilkinson, (1971): Maps and Diagrams, Methuen & Co. Ltd., London.
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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	
	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 Cunningham, 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 – “Paryavaran Bhugol” Himalaya Publishing House – Mumbai 2013
- Thakur and other - – “Paryavaran Bhugol” Konkani 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
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 – 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
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) : **पयटन भगोर**, Konkan Geographer's Publication
8. घारपुरे ,बठल(२०१०:) पयटन भूगोल ,पपळापुरेआबणप्रकाशक ,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
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	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
- Dikshit R. (1985): "Political Geography: A Contemporary Perspective" McGraw, Hill, New Delhi
- Dikshit, S. (1993): "Electoral Geography of India", Vishwavidyalaya Prakashan, Varanasi
- Dwivedi, R. (1996): "Political Geography" Chaitanya Prakshan, Allahabad
- Jones, M. (2004): "An Introduction to Political Geography: Space, Place and Politics", Routledge
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- Painter, J. and Jeffrey, A. (2009): "Political Geography", Sage Publications
- Sinha, M. (2007): "Electoral Geography of India", Adhyayan Publications and Distributers, New Delhi
- घारपुरे के र (२०१३) राजकीयभग ोर, लापु कि ., नागप पप रे अड
- राटकर, आपटे (१९९८) राजकीयभग ोर, कदयाप्रकाशन, नागपूर
- पाटीर क्राश (२०१५) राजकीयभग ोर, प्रकाशितपब्लिके कन, जलगाव

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 –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 Karanjkehele – प्रात्य सक भ ोर,
- Karlekar Shrikant- प्रात्य सक भ ोर, डायमिंड पब्लरके कन्श
- Karlekar Shrikant- Bhoogol shastratil Sanshodhan Paddhati, डायमिंड पब्लरके कन्श
- 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:

1. Datt, G. And Mahajan, A. (2016): “Datt and Sundaram’s Indian Economy”, S. Chand Publishing, New Delhi
2. Dreze J and Sen A.: “Indian Economic Development and Social Opportunity”, Oxford University Press, London
3. Gautam, A. (2010): “Advanced Economic Geography”, ShardaPustakBhawan, Allahabad
4. Hartshorne T. & Alexander J.W.: “Economic Geography”, Prentice New Delhi
5. Hodder, B. and Lee, R. (2008): “Economic Geography”, Rawat Publishers, Jaipur
6. Khanna K.K., Gupta V. K., (1987): “Economic and Commercial Geography”, Sultan Chand and Com.
7. Memoria, C. B. : “Economic and Commercial Geography of India”
8. Saxena, H. (2016): “Economic Geography”, Rawat Publishers, Jaipur
9. Singh, J. and Dhillon, S.: “Agricultural Geography”, Tata McGraw hill Publication Company Ltd., New Delhi.
10. Vaidya B.C. (1998): “Readings in Transportation Geography”, Devika Publications, New Delhi.
11. Vaidya B.C. (2003): “Geography of Transport Development”, Concept Publication, New Delhi.
12. Weber Alfred (1957): “Theory of Location of Industry” Chicago Press
13. अब्दिराव, धापटने, पाटनील, पशदे)१९९७(: आर्थिक भूगोल, ब्राली प्रकाशन, पुणे
14. एस. ए. ठाकूर, आर. बी. पाटनील, पेडणेकर, धुरी)२०१२(: आर्थिक भूगोल, कोकण जोग्रफसु असोसिएशन
15. खतीब)२००७(: आर्थिक भूगोल, मेिता पब्लिशिंग हाउस, कोल्हापूर
16. फु ले, पशदे, पवार, अडसूळ, पाटनील)१९९८(: आर्थिक भूगोल, सप्रेमप्रकाशन, कोल्हापूर
17. ब्रुल घारपुरे (२०१३): आर्थिक भूगोल, पपळापुरे अंड पब्लिशसु, नागपूर.
18. पशदे, कें गारे, माने-देशमुख)१९९९(: आर्थिक भूगोल, फडके प्रकाशन, कोल्हापूर
19. सवदी, कोळेकर (२०१०): अभिनव भूगोल : , ब्राली 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		
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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 –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		12
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	
Unit -III: Plant Community		12
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	
Unit –IV: Marine Biogeography		12
4.1.	Marine Biogeography meaning and concept	
4.2.	Types of ocean habitats	
4.3.	Biogeography of estuaries	
4.4.	Island biogeography	
Unit-V: Biodiversity		12
5.1.	Meaning and types of Biodiversity	
5.2.	Importance of Biodiversity	
5.3.	Causes of Biodiversity loss	
5.4.	Biodiversity conservation	

References:

- Flannery, T. 2015. The Eternal Frontier: An Ecological History of North America and Its Peoples. Grove/Atlantic, Inc.
- Gavin, D. G. 2012. Biogeography. Pages 77–89 in J. P. Stoltman, editor. 21st Century Geography: A Reference Handbook. SAGE Publications, Thousand Oaks, CA.
- Jackson, S. T. 2004. Quaternary biogeography: Linking biotic responses to environmental variability across timescales. Pages 47–65 in M. V. Lomolino and L. R. Heaney, editors. Frontiers of Biogeography: New Directions in the Geography of Nature. Sinauer, Sunderland, MA.
- Lomolino, M. V., B. R. Riddle, J. H. Brown, and R. J. Whittaker. 2010. Biogeography. Fourth Edition. Sinauer Associates, Sunderland, MA.
- MacDonald, G. M. 2003. Biogeography: Space, Time and Life. Wiley, New York.
- McCarthy, D. 2011. Here Be Dragons: How the study of animal and plant distributions revolutionized our views of life and Earth. OUP Oxford.
- Molles, M. C. 1999. Ecology: Concepts and Applications. WCB/McGraw-Hill.
- Perry, D. A., R. Oren, and S. C. Hart. 2013. Forest Ecosystems. JHU 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		
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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 – 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		12
3.1	Race: Major races and its distribution in India	
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		12
4.1	Social groups – identification and distribution	
4.2	Residential segregation	
4.3	Functional segregation	
4.4	Social issues in the city	
UNIT – V: Contemporary Issues in India		12
5.1	Religion related social issues	
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.		
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	20 Marks

	or Two short answer questions each 10 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 – 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		12
2.1	Transport net work 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	
Unit-III : Evolution of Modes of Transport		12
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	
Unit-IV : Theoretical Framework of Transport		12
4.1	Connectivity and its Measurement	
4.2	Accessibility and its Measurement	
4.3	Taffe’s model	
4.4	Gravity model	
Unit-V: Transportation Issues in India		12
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	

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QUESTION PAPER PATTERN:

Time: 3 hours		Marks; 100
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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	20 Marks

