SOLAPUR UNIVERSTIY, SOLAPUR

Class-M.A/M.sc-II-Geography

(Choice Based Credit System) (w.e.f.June-2016-17)

Semester-III

Paper No.		Title of Paper	Internal Marks	Final Marks	Total Marks	Credit
Code N0	Course No.					
PG – 2	PG – 201	Agricultural Geography	30	70	100	4
PG – 2	PG – 202	Settlement Geography	30	70	100	4
PG – 2	PG – 203	Biogeography	30	70	100	4
PG – 2	PG – 204	Cultural Geography	30	70	100	4
PG – 2	PG – 205	Practical V - Quantitative Techniques	30	70	100	4
PG – 2	PG – 206	Practical VI - Computer Mapping in Geography	30	70	100	4
		Periodical Test/Seminars/Tutorial/field work/Project Work/Home Assignment/Industrial Visit/Viva/Oral/Quiz etc	25	-	25	1
		Total			625	

Note:

As per the credit system, the assessment of theory paper of 100 marks weight age will be as 70 marks theory assessment by university examination and 30 marks internal assessment by the Department for internal assessment of candidate Periodical Test/Seminars/Tutorial/field work/Project Work/Home Assignment/Industrial Visit/Viva/Oral/Quiz etc may be suitably adopted.

Semester-IV

Paper No.		Title of Paper	Internal Marks	Final Exam. Marks	Total Marks	Credit
Code N0	Course No.					
PG - 2	PG - 207	Regional Planning and Development in India	30	70	100	4
PG - 2	PG - 208	Development of Modern Geography	30	70	100	4
PG - 2	PG - 209 A	Political Geography	30	70	100	4
	PG - 209 B	Geography of Health OR	30	70	100	4
PG - 2	PG- 210 A	Geography of Tourism OR	30	70	100	4
	PG - 210 B	Geography of Manufacturing OR	30	70	100	4
	PG - 210 C	Geography of Marketing	30	70	100	4
PG - 2	PG - 211	Practical VII - Remote Sensing & GIS	30	70	100	4
PG - 2	PG - 212	Practical VIII – Project Report with field Work	30	70	100	4
		Periodical Test/ Seminars/ Tutorial/ Field work/ Project work/ Home Assignment/ Industrial visit/ Viva/ Quiz etc.	25	-	25	1
		Total			625	

Note:

- For the IV Semester first three theory papers (PG 207, PG 208, PG 209 A) are compulsory and students can chose any one theory paper amount the PG 209 B, PG 210 A, PG 210 B and PG 210 C.
- As per the credit system, the assessment of theory paper of 100 marks weight age will be as 70 marks theory assessment by university examination and 30 marks internal assessment by the Department for internal assessment of candidate Periodical Test/Seminars/Tutorial/fieldwork/Project Work/Home Assignment/Industrial Visit/Viva/Oral/Quiz etc may be suitably adopted.
- Total Periods/Lectures for each paper shall be 50 per semester.
- Total Periods/Lectures for each practical paper shall be 128 per semester.
- Strength of students for each practical batch shall not more than twelve.

SOLAPUR UNIVERSTIY, SOLAPUR
Class-M.A/M.sc-II
(Choice Based Credit System)
Semester-III
Sub-Geography (Paper No IX)
Name of the paper-Agriculture Geography
(W. E. F. June 2016)

Code No-PG2 **Course No-PG 201**

Total Mark- 100 (Credit-4) **Total Lectures- 60**

Objective:-

1) To familiarize the students with concept origin and development of agriculture and to examine the role of agricultural determinants. The course further aims to make familiarize the student with the application of various theories, models, Agricultural system and productivity.

2) To familiarize the students with green revolution in India, contemporary issues and agriculture problems.

Unit No.	Descriptions	No. of Lectures
I	Introduction to Agricultural Geography. 1) Definition, Nature & Scope of Agricultural Geography. 2) Origin & Evaluation of Agriculture. 3) Approaches to the study of Agricultural Geography: 1) Systematic 2) Regional	15
II	Determinants of Agriculture and Agricultural systems. 1) Physical, economic and technological Determinants. 2) Location, distribution, types and characteristics of following World Agricultural systems. Shifting Cultivation, Intensive, Extensive, Plantation, Mixed Agriculture and Dairy Farming.	15
III	Agricultural regions and Agricultural Models. 1) Concepts and techniques of delimitation of agricultural regions: Crop combination, Crop diversification. Measurements of agricultural Productivity. 2) Agricultural land use Model: Von Thunen's Model & Jonasson's Model.	15
IV	Green Revolution in India: 1) Nature and impact of socio-Economic problems and prospects in the adoption of Green Revolution: ecological implications of the green revolution . 2) Contemporary issues: food, nutrition and Hunger. 3) Agricultural policies in India.	15

Reference Books

Sr. No.	Name of Books	Name of Authors
1	Geography of Agriculture: Themes in Research, Prentice-Hall Englewood cliff. London.	Gregor H.F. (1970)
2	Agricultural Geography, Oxford University Press, London	Ilbury B.W. (1983)
3	Agriculture and Environment Change, John Wiely, London.	Mannlon A.M. (1995)
4	Studies in Agricultural Geography, Rajesh Publication, New Delhi	Mohammed Ali. (1978)
5	Agricultural Geography, New Delhi.	Singh Jasbir & Dhillion S.S.
6	Agricultural Geography, Newton Abbot	Tarrant J.R. (1974)
7	Poverty Agricultural & Economic Growth, Vikas Publication New Delhi	Bhatia B.M. (1977)
8	The agricultural Systems of the World, Cambridge University Press	Grigg D.B. (1973)
9	Systematic Agricultural Geography, Rawat Publication Jaipur (India)	Husain Majid (2002)
10	Agricultural Geography, London.	Symon. (1968)
11	Perspective in Agricultural Geography, Six Volumes.	Noor Mohammed
12	Green-Revolution How is it?, Vishal Publication, Kurukshetra.	Jasbir Singh (1973)

Class – M.A./M.Sc. – II
(Choice Based Credit System)
Semester - III
Sub – Geography
Name of the Paper – Settlement Geography

Code No. PG 2 **Course No: PG 202**
Marks: - 100 **Total Lectures: - 60**

Objective: -

1) To familiarize the students with the conceptual, theoretical and empirical development in settlement studies in Geography.
2) To provide an idea to the students about the national issues of settlements.

Unit No.	Sub Units	No. of. Lectures
I	Settlement Geography: - Definitions, nature and scope, significance and evolution of human settlement; trend of Human Settlement.	15
II	Evolution, Size and growth of human Settlement, Rural Settlement: types and pattern.	15
III	Settlement Structure: Physical (characteristics of internal and external form) morphological structure of cities. Functional classification of towns and villages. Functional landscape, Functional structure of towns in India. Landuse Principles and theories of land use in Rural setting, House types and building material, Environmental, socio-economic cultural factors influencing on the dynamics of settlement structure.	15
IV	Theories of christaller and August Losch and their applications. Measurement of centrality and hierarchy. Hierarchy of settlements in India-an empirical exercise.Issues, perspective and policies on population and Human settlements. Interface between human settlements and environment.	15

Reference

1. Alam, M. and Gopi, K. N. (1982): Settlement System of India, Oxford and IBH Publication, New Delhi
2. Ambrose, Peter, Concepts in Geography Vol.-I Settlement Pattern, Longman 197.
3. Census of India, House types and Settlement Patterns of Villages in India, GOI, New Delhi 1961.
4. David P., Hopkinson M. (1983): The Geography of Settlements, Oliver & Boyd; 2nd Revised edition.
5. Deniel P. (2002): Geography of Settlements. Rawat Publications, Jaipur and New Delhi.
6. Gosh S. (1998): Introduction to Settlement Geography. Orient Longman.
7. Hornby WF., Jones M. (1991): An Introduction to Settlement Geography. Cambridge University Press.
8. Hudson, F. S. (1977) Geography of Settlement Mcdonadls and Evaus New York
9. Singh R. Y. Geography of settlement, Rawat Pub. Jaipur

Semester-III

Paper – Optional Geography
Paper Title: BIOGEOGRAPHY

Code No: - **Total Marks: - 100 (70+30)**
Course No: **Lecture per week: 04**
No. of Credit - 04

Objectives –

1. To introduce the students to the basic concepts in Biogeography, So as to enable them in understand the Biogeographical principles through an interdisciplinary approach.
2. To acquaint the students to the spatial relationship which exists between man and nature.
3. To make the students aware of need of conservation of nature.

Unit No	Name of the Topic	Sub Topics	Total Lectures
1	Introduction to Biogeography	1. Definition and meaning.2. Nature and Scope of Biogeography. 3. Branches of Biogeography.4. Environment and ecosystem-functions of ecosystem. 5. Types of biomes-Tropical, temperate & Polar.	10
2	Factors Influencing the Biogeography	1. Geographical- Physiographic, Soil, Climate, vegetation and Water 2. Anthropogenic.3.Paleorecords of plants and animals.4.Paleo records of climate changes in India.	10
3	Plant Geography	1. Elements of Plant Geography. 2. Major forest regions of the world. 3.Plant succession in the newly formed regions with suitable examples. 4.Dispersal of plants	08
4	Zoogeography	1. Relationship of Zoogeography with the environment.2.Migration and dispersal of animals.3.Causes and effects of migration.	05

5	Conservation of Biodiversity	1. Concept of Biodiversity – Importance 2. Concept of Conservation 3. Hot-Spot of Biodiversity and India's as mega diversity region.4. Threats to biodiversity- Natural and Manmade. 5. Laws of Environmental protection	10

Reference Books

Sr.No.	**Name of the Book**	**Name of the Author**
1	Introduction to Plant Geography Longman, Green and Co. Ltd. London	Polunin Nicholas (1960)
2	Ecology and Environment –Published by Kumar Rastogi, Meerut, Rajesh Printers New Delhi	Sharma P.D. (1994-95)
3	Basic Biogeography Longman Group Ltd. London	Nigel Pears (1977)
4	Biogeography, Lotus Publication, Solapur	Y S Khan
5	Environmental Geography, Rawat Publication Jaipur	H M Saxena
6	Patterns of Life:- Biogeography of the changingworld –Unwin Hyman Inc. Ltd. Londan (1989)	Meike Howard K
7	Biogeography English Language Book Society, Londan (1982)	H. Robinson

Semester-IV
Paper – Optional Geography
Paper Title: SOIL GEOGRAPHY

Code No: - **Total Marks: - 100 (70+30)**
Course No: **Lecture per week: 04**
No. of Credit - 04

Objectives –

1. To introduce the students to the basic concepts in Soil geography, to enable them in understand the Soil Geographical principles through an interdisciplinary approach.
2. To acquaint the students to the spatial relationship this exists between man and nature.
3. To make the students aware of need of conservation of nature and importance of Soil to Agriculture geographical environment.
4. To course further aims to familiarize the students with the modern techniques used in Agriculture Geography.

Unit No.	Name of The Topic	Sub Topics	Total Lectures
1	Introduction and Soil characters	1.Definition of soil.Soil as a resource 2.Water holding capacity, Field capacity 3.Wilting point. Brief history of Soil Science.	10
2	Factors of soil formation	1.Topography 2.Climate.3.Biotic 4.Parent material.5.Time . Importance of weathering processes in Soil formation.	10
3	Classification of Soils	A) Classification of Soil i) Podzol ii) Pedocal B) Study of following Soils:- Mountain Soil, Alluvial soil, Regur soil Red soil, Laterite soil	10
4	Soil :-Physical & Chemical properties s	A) Soil texture-porosity, permeability, colour. B) Ion exchange-pH of the soil.	10

5	Problems of Soils	A) Alkaline soils, Saline Soils,Acidic Soils B) Soil degradation C) Coil conservation and management	10

Reference Books

Sr. No.	**Name of the Book**	**Name of the Author**
1	Environmental Geography, Rawat Publication Jaipur	H M Saxena
2	Patterns of Life:- Biogeography of the changingworld – Unwin Hyman Inc. Ltd. Londan (1989)	Meike Howard K
3	Biogeography English Language Book Society, Londan (1982)	H. Robinson
4	Geography of Soils Hutchinson London 1965	Bunting B.T
5	Fundamentals of Soil Sciences Johan wiely new yark 1978	Foth H.D
6	Soil	Butter Worth London, Briggs Danil
7	Weathering Pedology and Geomorphogic Research Brikland Publication	Olliar
8	Soil Condition and plant growth longman1961	Russel E.J
9	Climate Soil and vegetation University Tuteri press 1969	Money D.C

Semester - III
Sub – Geography
Name of the Paper – Cultural Geography

Code No. PG 2 Course No: PG 204 **Total Marks: - 100 (Credit-4)**

Total Lectures: - 60

Objective: -

1) To understand diversity of culture in the world as well as in India.

2) To comprehend the diffusion of various ethnic traits and religions.

3) To understand the relationship between culture and pattern of living and economic development.

Course Contents

Unit No.	Sub Units	No. of Lectures
I	Introduction, evolution, definition, nature, scope, element, component of culture, significance of cultural Geography.	15
II	Concept of culture, Bases of cultural diversity, Race, Religion and language, cultural diversity and regionalization in India. Concept of cultural hearths and cultural diffusion, world cultural realms.	15
III	Socio-Cultural development and well being indicators. Cultural pattern of rural and urban society. Social and cultural processes in the developing countries with special reference to India.	15
IV	Tribal groups, diffusion of Religion and Ethnic traits in the world. Economic activities and cultural adaptation- Agricultural, Industrial and modern technological changes and their geographic implications.	15

Reference Books

1. Ahmad Aijarudin (1999): Social Geography, Rawat Publication Jaipur
2. Broek, Jan O. M. &Webb. John W. (1973): A Geography of Mankind, Mc-grew-K Book Co. New York
3. Jackon, Richard H and Loyd E. Hudman (1990): An introduction to cultural Geography, Unwin Hyman London.
4. Jones, Emrys and Eyles John (1997):Cultural geography, - People places and Environment west Publishing Co. New york.
5. Jones, Emrys and Eyles John (1997) :An Introduction to Social Geography, - Oxford University Press Oxford.
6. Majid Hussain (1994): Human Geography – Rawat Publication Jaipur.
7. Mukherjee A. B.K. Arijazuddin A (1985): India culture Society and economy Inter India Publication, New Delhi
8. Massey D. K. Jess P.(1995):A place in the world cultures and Globalization, Oxford University, New York
9. Crang Mike (1998): Cultural Geography – Rout, leldge, Publication, London.

Semester-III
Sub-Geography
Name of the paper-Remote Sensing

Total Mark- 100 (Credit-4) **Total Lectures- 60**

Objective:-

1) Make students familiar with concept of Remote Sensing and its use in present Geographic studies.
2) To give detailed knowledge about Aerial photography.
3) Make students familiar with concept of Geographical Information System.

Unit No.	Descriptions	No. of Lectures
I	Remote Sensing:-1.Concept of Remote Sensing, 2.Advantages and limitations of Remote Sensing, 3.Application of Remote Sensing in Geography	15
II	(1) Electromagnetic Radiation Energy and its interaction with atmospheric matter. (2) Remote Sensing: (a)Platforms-Types and their characteristics (b) Sensors-Types and their characteristics (c) Data products.	15
III	(1)Aerial Photography: (a) Types of Aerial photographs, (b) Scale And Resolution, (c) Difference between Topographic maps and Imageries & Aerial photographs.	15
IV	1) Basic Principles, types, steps and elements of image interpretation. 2) Techniques of Visual interpretation and interpretation key.	15

Reference Books

Sr. No.	Name of Books
1	Barrett E.C. and L.F. Curtis (1992): Fundamentals of remote sensing and air photo interpretation – Mcmillon, New York
2	Curran Paul. J. (1985): Introduction of remotes sensing, londman, London.
3	Comphell J. (1989): Introduction to remote sensing, Fuildord, New York.
4	Lillesand I. M. and kiefer R. W. (1979): Remote sensing and image interpretation, John Willey & Sons New York
5	Leuder D.R. (1959): Areal Photographic interpretation, Mc grew Hill Book Company, New York.
6	Saini R. R. Kalwar S. C. (1991): Remote sensing in geography, pointer Publishers, Jaipur.
7	Sabins F. F. Jour (1987): Remote sensing principal of interpretation, (II edition) W.H. Freeman and Company, New York.
8	Ian, Haywood & others (2006): Geographical Information System, pearson Education, Inc., Delhi.
9	Jamwal, Anil K. (2008): Geographical Information System, Jnanada Prakashan, New Delhi.

Semester - III
Sub – Geography
Name of the Paper – Urban Geography

Code No. PG 2 **Course No: PG 202**
Marks: - 100 **Total Lectures: - 60**
Objective: -

1) To familiarize the students with the conceptual, theoretical and empirical development in settlement studies in Geography.
2) To provide an idea to the students about the national issues of settlements.

Unit No.	Sub Units	No. of. Lectures
I	Nature and scope of Urban Geography. Different approaches and recent trends on Urban Geography, attributes of urban places during ancient, medieval and modern period. Origin and growth of urban settlement.	15
II	Functions and functional classification of urban settlement, size and spacing of cites. Rank size rule, Law of primate city, urban hierarchies, urban problems, environmental issues, urban housing polices and challenges.	15
III	Contemporary urban issues, urban poverty, urban renewal, urban sprawl, slums, transportation, housing , urban infrastructure, urban finance, urban crime	15
IV	Theories and models in urban Geography, theories of Burgess, Homer Hoyt, Harries and Ullman,Christaller. Globalization and Urbanization and its impact on developed and developing countries	15

Books:

1. Chopra G. –Urban Geography –Bookmen Associates Japan.
2. Saxena H. – Urban Geography - Bookmen Associates Japan.
3. Majid H. : Urban Geography-Bookmen
4. Bose, A. (1980): India's Urbanization, Tata McGraw Hill, New Delhi
5. Carter, H. (1979): The Study of Urban Geography, Arnold Heinemann, London
6. Hall, T. (2006): Urban Geography, Routledge, London.
7. Johnston J.H. (1974): Urban Geography, Pergoman Press, Oxford.
8. Mandal R. B. (2000) : Urban Geography, Concept Publishing Co., New Delhi.
9. Mayer H.M. Cohen (1967): Readings in Urban Geography, central Book Depot,Allahabad.
10. Pacione, M. (2009): Urban Geography, Routledge, New York

Semester III
Sub.: Geography (Paper No.)
Name of the Paper: Geographical Information System
(w. e. f. June 2016)

Code No.: Course No.:
No. of Credit: 04 Total Marks: 100 Total Lectures: 60

Course objectives:

1. To introduce GIS (Geographic Information System) as a tool of spatial science.
2. To indicate the basic elements of GIS and methodology of GIS.

Sr. No.	Description	No. of Lectures
1	Definition of G.I.S., Evolution and Development of G.I.S., Elements of G.I.S., Hardware and Software required in GIS	15
2	Concept of Model of Spatial Information: Raster Data Model, Vector Data Model, Comparative Overview. Concept of Model of non-spatial Data: Hierarchical data, base structure and Network structure	15
3	Structure of Spatial Data: Scanning, digitization, error detection Application of GIS technology in Urban management and Environment Management.	15
4.	Manipulation and Analysis of Data: Measurement of lengths, perimeter and areas, queries, buffer analysis, topology, neighborhood operations, network operations, overlay analysis, location-allocation analysis problems, and surface analysis. Interpolation and its methods.	15

References:

1. Demers, Mechael N. (2000): Fundamentals of Geographical Information System, Prentice Hall
2. Haywood, Ina (2000): Geographical Information System, Longman
3. Chang, Kang-Taung (2002): Geographical Information System, Tata MrGraw-Hill.
4. Kaplan, E.D., and Hegarty, C.J. (2006): Understanding GPS: Principles and Applications (2nd Ed.), Artech house, Norwood, MA, USA.
5. Peuquet D.J. and D.F.Merble, Introductory Reading in Geographic Information Systems. Taylor & Francis Washington. 1990.
6. Fraser Taylor D.R. Geographic information Systems. Pergamon Press. Oxford. 1991.
7. Albrecht J. (2007), Key Concepts and Techniques in GIS, Sage.

Sub: - Geography (Environmental Geography)

M.A./ M.Sc. Part –II (2nd Year)

Allocation of Periods/ Lectures & Scheme of Examination with title of papers

Form - June 2016

Semester-III

Paper No.		Title of Paper	Internal Marks	Final Exam. Marks	Total Marks	Credit
Code N0	Course No.					
PG – 2	PG	Environmental Geography	**30**	**70**	**100**	**4**

Note:

- As per the credit system, the assessment of theory paper of 100 marks weight age will be as 70 marks theory assessment by university examination and 30 marks internal assessment by the Department for internal assessment of candidate Periodical Test/Seminars/Tutorial/fieldwork/Project Work/Home Assignment/Industrial Visit/Viva/Oral/Quiz etc may be suitably adopted.

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Class - M.A./M.Sc. - II

Semester – III

Sub – Geography (Environmental Geography)

Name of the Paper - Environmental Geography

Code No. PG 2 **Total Marks: - 100(Credit-04)**

Course No: - PG **Total Lectures: - 60**

Objectives: -

1. To understand and evaluate the concept of Environmental geography.
2. To understand the role and relevance of Environment in human life.
3. To identify the causes of Environmental Degradation and its Consequences.

Course Contents

Unit No.	Units	No. of Lectures
I	Definition, Nature, Scope and Content of Environmental Geography, Elements of Environment.	15
II	Terrestrial and Aquatic ecosystem – Location, types and characteristics; Energy flow in an ecosystem; Ecological pyramids and food chains, Succession, restoration and simplification of ecosystem; Ecosystem stability: risk, conservation and management; Biological cycles.	15
III	Issues related to Physical Environment: Environmental Degradation. 1. Environmental Degradation by Soil Erosion 2. Environmental Degradation due to Human Action-Deforestation 3.Pollution – Air, Water and Noise pollution-Causes, Effects and Measures 4. Global Environmental Issues- Global warming, Ozone Layers, Deflection and Acid Rain.	15
IV	Issues Related to Physical Environment: Environmental Disaster 1. Natural Disaster: Floods, Droughts, Earth Quakes and Land Slides- with special Reference to India. 2. Environmental Management and Policy.	15

Reference Books:

1. Abbott, P.L: Natural Disasters. McGraw-Hill, London.
2. Botkin, D.B., and Keller, E.A. (2007): Environmental science: Earth as a Living Planet. John Wiley and Sons, New York.
3. Cunningham, W. Cunningham, Mary: Environmental Science: A Global Concern (2010). MacGraw-Hill, London.
4. Government of India (2010): Status of Environment Report. New Delhi.
5. Keller, E.A, Vecchio, D.E.de: Natural Hazards: Earth's Processes as Hazards, Disasters, and Catastrophes. Prentice Hall, New York.
6. Marsh, W.M., Grossa, J. (2005): Environmental Geography: Science, land use, and Earth Systems. John Wiley, New York.
7. McKinney, M.L., Schoch, R.M. (2003): Environmental science: Systems and Solutions. Jones & Bartlett Learning, 2003.
8. Miller, G.T, Spoolman, Scott (2011): Environmental Science. Brooks Cloe, London.
9. Raven P.H., Berg, L.R, Hassenzahl, and D.M Peter: Environment. John Wiley, New Delhi.
10. Savinder Singh (1991): Environmental Geography. Prayag Pustak Bhavan, Allahabad.
11. Wright, R.T., Nebel, B.J. (2005): Environmental science: Toward a sustainable future. Pearson/Prentice Hall, New Jersey
12. . http://www.pbs.org/wnet/savageearth

Semester-III
Sub- Geography (Practical Paper- V)
Name of the Paper- Quantitative Techniques

Code No. PG 2 **Course No: PG 205**

Total Marks- 70 **Total Lectures- 60**

Unit No.	Name of the Units	Description	Lectures
I	Quantitative techniques in Population Geography	1.Measurement of birth rates 2. Measurement of death rates 3. Population projection by semi Average method and Least Square method 4. Lorenz Curve.	15
II	Quantitative techniques in Agricultural Geography	1.Measurement of agricultural productivity- Kendall's method, Sapre and Deshpande's method. 2. Crop Combination method of Weaver and Doi. 3. Crop Concentration-Bhatia's method. 4. Crop Diversification-Bhatia's method	15
III	Quantitative techniques in Settlement Geography	1.Nelson's method of functional Classification of towns. 2. Nearest Neighbour Analysis. 3. Rank-Size Rule and Primate index	15
IV	Quantitative techniques in Marketing Geography	1.Basic Gravity Model. 2. Law of Retail Gravitation 3. Breaking Point Theory 4. Accessibility of Transport network. 5. Calculation of Centrality	15
V	Journal		

Reference Books:

Name of Books:

1. Gregary, S. Statistical Methods and the Geographers. Longman Group Ltd.
2. Hammond. R and Mc Cullogh,-Quantitative Techniques in Geography: an introduction, Clarendon Press, Oxford.
3. Woodcock R. G. & Bailey M. J. – Quantitative Geography, Mac Donald & EransLtd. London.
4. Elhance D. N. – Fundamentals of Statistics, Kitab Mahal, Allahbad.
5. Mahmood Aslam Statistical Methods in Geography.
6. Cole and king-Quantitative Geography.
7. Saxena. H. M. Geography of Marketing; Concepts and methods, New Delhi
8. Singh Jasbir-An Agricultural Geography, Vishal Publication, Kurukshetra.
9. Clarke. J. I. – Population Geography, Pergamoh Press, London.
10. Chandana and siddhu – Population Geography
11. Hudson F.S. (1976): Geography of Settlements
12. Sing R.L.: Reading in Rural Settlement Geography
13. Yeats M.H. (1974): An Introduction to Quantitative Analysis in Human Geography
14. Liendsor J.M.(1997): Techniques in Human Geography, Routledge

Practical Paper VI

Name of the paper- Computer Mapping In Geography

Code No-PG 2 **Course No-PG 206**
Total Mark- 100 (Credit-4) **Total Lectures- 90**

Objective:-

1) To familiarize the students with Computer, its characteristics, Operating system and data structure

2) To develop the skill to use computer in Geographic studies and to familiarize the students with internet

Unit No.	Descriptions	Lectures
I	Introduction to computer. 1) Definition and characteristics of computer 2) Operating system: Definition function and types of Operating system 3) Introduction to Dos, Window and excel. 4) Applications of computer in Geography	20
II	Computer and Geographic data 1) Types of Geographic data 2) Scale of measurement- Nominal, ordinal, Interval, Computer data representation, Binary system, Bits and Bites, Numbers and characteristics, Data Storage hierarchy, Basic elements of Data communication. 3) Data Structure: Definition, Types of data structure: Hierarchical structure, Network Structure, Relation structure, Link structure, Spatial data structure.	20
III	Computer in Cartography and Computation Analysis. 1) Simple exercise for representation of Geographical data by Histogram, Bar graph, line graph, multiple line graph, Scatter diagram and pie chart 2) Computation Analysis: Measures of central tendency, Quartile deviation, Standard deviation, correlation ('r' value) and trend line with help of computer.	30
IV	Importance of information technology in Geographical studies. 1) Uses and advantages of Internet. 2) Browsing and surfing the geographical sites: World Wide Web, Web Page, Web Servers, Websites, web browsing, Down loading files.	20
	Journal	

Reference Books

Sr. No.	Name of Books	Name of Authors
1	Computer Programming for Geographer, Longman London	D. J. Unwin & J. A. Dawson (1987)
2	Computer in Geography, Longman Scientific and Technical, London.	David J. Magthre (1989)
3	Computer Application in Geography, Jahn Wiley & Sons, New York U. S. A.	Paul M. Mather (1993)
4	Quantitative Geography	Cole and King (1968)
5	Quantitative Technique in Geography, Clarendon press – Oxford	Himmond B. (1974)
6	Computer System and Applications, Himalaya publishing house, Mumbai-400004	Rustan Shorf (2004)f
7	Computer System a Application, BPB publication, new Delhi	Sinha & Sinha (2005)

Semester - IV
Sub – Geography

Name of the Paper - Regional Planning and Development in India

Code No. PG - 2 Total Marks: - 100 (Credit-04)

Course No: PG - 207 Total Lectures: - 60

Objectives: -

4. To understand and evaluate the concept of region in geography.
5. To understand the role and relevance of region in regional planning.
6. To identify the causes of regional differences in development, perspectives & policy imperatives.
7. To understand the problems of regional development.

Course Contents

Unit No.	Sub Units	No. of Lectures
I	Region- Concept of Region, Characteristics, Types of Region-Formal or Natural and Functional, Classification of Region-Based on Physical, Cultural and Physical-Cultural Variation, Hierarchy of Region. Planning-Concept, Types, Regional planning- Concept and Approaches.	15
II	Concept of Growth and Development, Indicators of Development, Measurement of Regional Development, Regional imbalances in India-Agricultural and Industrial.	15
III	Theoretical Framework for Regional Planning –Spread and Backwash Concept, Central Place Theory, Growth Pole Theory and Growth Foci Approach.	15
IV	Concept of Multi-level Planning, Role of Panchayat Raj System in Regional Development (Village, Tahsil and District), Regional Development in India and Maharashtra-Problems and Prospects, Regional Development in Macro, Meso and Micro level- Problems and Prospects.	15

Reference Books:

1 Bhat L.S.(1973): Regional Planning in India, Statistical Publishing Society, Calcutta

2 Chand M. & Puri V. (1985): Regional Planning in India Allied Publishers Ltd., New Delhi.

3 Gosal, G.S. and Krishan, G: Regional Disparities in Levels of Socio-economic Development in Punjab, Vishal Publication, Kurukshetra, 1984.

4 Government of India, Planning Commission: Third Five Year Plan, Chapter on Regional Imbalances in Development, New Delhi 1961.

5 Kuklinski, A.R. (ed.) Growth Poles and Growth Centres in Regional Planning Mouton, The Hague, 1972

6 Regional Planning concepts Techniques, Polies and case studies concept publishing crop New Delhi 1992

7 Misra, R. P. and Other (editors) Regional Development Planning in India – A Strategy. Institute of Development Studies Mysore, 1974.

8 Myrdal, G: Economic Theory and Under Development Regions Gerald Dockworth, London 1957

Name of the Paper - Development of Modern Geography

Code No. PG-2 Total Marks: - 100 (Credit-04)

Course No: PG-208 Total Lectures: - 60

Objectives: -

8. To introduce the students to the philosophical and methodological foundations of the subject & its place in the world of knowledge.
9. To familiarize student with the major land marks in development of geographic thought at different periods of time.

Course Contents

Unit No.	Sub Units	No. of Lectures
I	The field of Geography: Its place in the classification of sciences, ii) Development of Geography through ages, the ancient and medieval period iii) Age of exploration and impact of discoveries on the development of geography.	**15**
II	A) Rise of Dualisms in Geography, dualism the myth & realism, dualism between Regional & Systematic geography, dualism between Physical and Human geography. B) Concepts of Developmental issues in Geography: Environmental–determinism, Possibilism.	**15**
III	Founders of Modern Geography:-Carl Ritter, Alexander Von. Humboldt, Vidal-de-la-Blache, H. J. Mackinder, Richard Hartshorne.	**15**
IV	A) Approaches in Geography: - i) Positivism ii) Humanism iii) Radicalism, iv) Behaviouralism B) Measurement and explanation in Geography: Laws, theories and models. Quantitative revaluation in Geography : Concept, Causes and Applications. C) Paradigms & Philosophy in Geography	**15**

Reference Books

1. Abler, Ronald; Adams, Johan, S. Gould, Pater, Spatial Organization; The Geographer's View of the World, Prentice Hall, N. J. 1971.
2. Ali, S.M. The Geography of Puranas, Peoples Publishing House, Delhi 1966
3. Amedeo, Douglas: An Introduction to Scientific Reasoning in Geography, John Wiley, U.S.A. 1971.
4. Dikshit, R.D. (ed) The Art & Science of Geography-Integrated Readings, Prentice Hall of India, New Delhi, 1994
5. Hartshorne, R.: Perspectives on Nature of Geography, Rand MC Nally & Co. 1959.
6. Husain, M: Evolution of Geographic Thought Rawat Pub. Jaipur, 1984
7. Johnston, R.J. Philosophy and Human Geography Edward Arnold London, 1983
8. Johnston, R.J. The Future of Geography Methoun, London, 1988
9. Minshull, R. The Changing Nature of Geography, Hutchinson University Library, London, 1970.

Pedagogy: -

• Students of geography may be encouraged to interact with their counterparts from other disciplines and discuss the nature of their subject.

• The students may be encouraged to collect information on any theme amenable to geographical interpretation.

Sub – Geography
Name of the Paper – Political Geography
(w. e. f. June-2016)

Code No. PG 2 **Course No: - PG 209A**
Total Marks: -100(Credit-4) **Total Lectures:-60**

Objectives: -

1. To understand the basic concepts in Political Geography.
2. To enhance awareness of Multi-dimensional nature of geo-political space.
3. To make acquaint the students with nature of Geographical factors influencing the geo-political situations in India and world.

Course Contents

Unit No.	Sub Units	No. of. Lectures
I	**Political Geography:** Definition, Nature and Scope of Political Geography, Approaches to the study of Political Geography, Recent trends in political geography, Geographic elements of the state: physical, human and economic. Political Geography and environment interface.	**15**
II	**Themes in Political Geography:** State and Nation, Nation-State, Nationalism, Nation building, Frontiers and Boundaries, Capital-Classification, functions and world power perspectives on one core periphery.	**15**
III	**Global Strategic Models:** Mackinder theory of Heartland, Spykman and Mahans Sea power concept, its relevance to contemporary world situation, Geopolitical significance of Indian Ocean, Political Geography of SAARC region, South-East Asia, West Asia.	**15**
IV	**Political Geography of contemporary India:** with special reference to: the changing Political map of India. Unity and diversity, central and centrifugal forces, Stability and instability, Inter-state issues (like water disputes, reparion claims) and conflicts resolutions, Insurgency in border state, emergence of new states, federal India- Unity in diversity.	**15**

Reference Books:

Sr. No.	Name of Books
1.	Bhagwati, J. N. (Ed) (1976): New International Economic Order – The North – South Debate. M.I.T. Press, London.
2.	Dikshit, R.D. (1982): Political Geography: A Contemporary Perspective, Tata McGraw-Hill Publishing Company. New Delhi.
3.	Glassner M.I. (1993): Political Geography, John Wiley, New York.
4.	Panikkar, K.M. (1956): Geographical factors in Indian History. Bharatiya Vidya Bhavan, Bombay.
5	Pounds N.T. (1972): Political Geography Mc Graw Hill, New York.
6	Prescott, J.R.V. (1972): Political Geography Methouen and Co. London.
7	Schwartzberg, J.E. (1993): A Historical Atlas of South Asia, University of Chicago Press, U.S.A.
8	Short J. R. (1982): An Introduction to Political Geography, Routledge and Kegan Paul, London.
9	Taylor P. J. (Ed), (1993): Political Geography of the 20th Century – A Global Analysis, New York.
10	Taylor, Peter (1985): Political Geography, Longman, London.
11	William C.H. (Ed) (1993): Political Geography of the New World Order Halsted Ben, New York.

Pedagogy: -

- Fieldwork to understand the political/administrative boundary configurations and people problems and perceptions.
- Consult political maps (Large and small scale)
- Atlases and archival records.
- Collect relevant newspapers items for group discussion.
- Prepare pin-up board for display of important events of geopolitical nature.

Semester – IV
Paper- XVI
Sub – Geography
Name of the Paper – Geography of Tourism
(w.e.f. Jun 2016)

Paper Code No.- PG 2 **Total Marks: - 100(Credit-4)**
Course No:- PG 210A **Total Lectures: - 60**

Objective: - The objectives of this course are.

1) To understand the scope and role of tourism in World as well as Indian Economy.
2) To understand emerging developing tourism industry.
3) To familiarize students with tourism industry.
4) Acquiring the knowledge of different Tourist places in the World.
5) To Encourage the students to involve in tourism industry.

Course contents

Unit No.	Sub Units	No. of. Lectures
I	**Basics of Tourism;** Definition of tourism; Factors influencing on tourism: Types of tourism-cultural, coastal, Concept of Agro Tourism and Pro-Poverty Tourism, Elements of tourism, Tourism as an industry.	15
II	**Indian Tourism:** State wise regional dimensions of tourist attractions; promotion of tourism.(Roll of Center and State) Resources & growth of tourism, tourism policies in India. .Roll of Infrastructure and support system- accommodation and supplementary accommodation; other facilities and amenities; Tourism circuits, short and longer detraction – Agencies and Intermediacies	15
III	**Impacts of tourism:** Physical, economic and social and perceptional; positive and negative impacts; Globalization and tourism.- Role of foreign capital and impact of globalization on tourism. Impact of tourism on Indian Economy	15
IV	**Tourism in the State of Maharashtra:** Geographical, historical and cultural Factors influencing on tourism. Types of tourism, Impact of tourism on environment; Physical and cultural Any one Project report on relevant topic such as impact of Tourism on Drought Prone Area Development, Rural Tourism, Agro-Tourism, lakes, historical, cultural centers & beaches in the State of Maharashtra.	15

Reference Books

1.	**Bhatia A.K.:** Tourism Development Principles and Practices; Sterling Publishers, New Delhi 1996.
2.	**Bhatiya, A.K.** International Tourism – Fundamentals and Practices; Sterling New Delhi (1991).
3.	**Chandra R.H.:** Hill Tourism Planning and Development Kanishka publishers; New Delhi – 1998.
4.	**Kaul R.K.** Dynamics of Tourism & Recreation Inter-India New Delhi 1985.
5.	Kaul J: Himalayan Pilgrimages & New Tourism; Himalayan Books, New Delhi 1985.
6.	**Lea. J.:** Tourism and Development in the Third World, Routledge, London 1988.
7.	**Milton D:** Geography of World Tourism Prentice Hall, New York 1993.
8.	**Pearce D.G.:** Tourism To-day A Geographical Analysis, Harlow, Longman, 1987.
9.	**Robinson, H. A.:** Geography of Tourism, Macdonald and Evans, London, 1996.
10.	**Sinha P.C. (ed):** Tourism Impact Assessment, Anmol Publishers, New Delhi, 1998.

Pedagogy: -

Students may be encouraged to gain firsthand knowledge from filed excursions. An assignment may be given to the students in one of the followings.

A. Visit to a tourist centre and talk to some tourists and to write a report.
B. Collect the tourist pamphlets and maps from tourism-promotion agencies and to make a review on contents.
C. Visit to a tourist place and to list and map the work generation and problems and to suggest remedial measures.
D. Study tourism development policy and plans of government of India and the states with which the students are familiar and provide a geographers view point.
E. Visit to Ajanta/Ellora/Pandharpur/Tuljapur/Akkalkot / Beaches etc.

Semester-IV

Sub: Geography

Name of the Paper: Geography of Maharashtra

(w.e.f. June-2016)

Total Mark- 100 (Credit-4) **Total Lectures- 60**

Sr. No.	Name of the Topic	Sub Topic	Total Lecture
1	Introduction	1. Location 2. Physiography 3. Geology 4. Rivers Systems	12
2	Climate and Agriculture in Maharashtra	1. Climate, Seasons and Regions 2. Distribution of Rainfall 3. Major crops –Jawar, Rice, Wheat, Sugarcane, Cotton, Horticulture 4. Sources of irrigation and Distribution 5. Problems of agriculture	12
3	Resources in Maharashtra	1. Mineral and Power Resources- Bouxite, Manganese, Iron-ore, Coal, Mineral Oil, Natural Gas 2. Soil Resources- Soil types and their distribution, Soil Conservation 3. Biotic Resources- Forest, its types and distribution, Need of forest resources	12
4	Population, Transport of Maharashtra	1. Growth, Distribution and Density 2. Composition 3. Migration 4. Road ways and Rail ways	12
5	Tourist Places in Maharashtra	1. Religious 2. Hill station 3. Sea Beaches 4. Forts	12

References:

1. A.B.Savadi- “A mega State of Maharashtra”, Nirali Prakashan Pune
2. A.B.Savadi- Maharashtracha Bhugol Nirali Prakashan Pune, 1999
3. Bruce Mithel- “Geography and Resource Analysis” Joha willey and Sons, New York
4. B.D.Nag Choudhary- “Introduction of Economic Management, Inter Print, Mehta House, New Delhi
5. C.D.Deshpande –“Geography of Maharashtra” National Book Trust of India, New Delhi
6. C.G.Deshpande- Maharashtracha Bhugol Aanuvadak M.D. Tavade
7. Cutter, L, Renwik H.L.- Exploitation, Conservation and Preservation- A Geography, perspective and Natural
8. D.P.Mathews- “Water resources Geography and Law” Scientific Publisher, Jodhpur
9. Dr. Prakash Sawant- Maharashtra Bhugol, Phadkae Prakashan
10. Government of Maharashtra- “Economic Development of Maharashtra”
11. Karve-Maharashtra Land and People
12. K.A. Khatib- Maharashtracha Bhugol
13. S.M.Bhamare-Geography of Maharashtra, Prashant Publication
14. Santosh Dastane- Maharshtra Bhugol
15. Shree. Date- Maharashtra Sadhan Sampatticha Bhughol, National Book Trust of India, New Delhi
16. S.H.Deshpande- Economy of Maharashtra
17. T.P.Patil- Maharashtracha Bhugol

Class – M.A. /M.Sc. – II (Semester – IV)
Sub –Geography
Name of the Paper – Resource Geography

Code No. :- PG 2 **Course No: - PG**
Total Marks : - 70 Total Lectures:- 45
No. of Credits :- 04

Objectives:

1) To provide an overview of Resource Geography.
2) To provide an understanding of the existing reality of resource utilization.
3) To sensitize the students to the concept of sustainable resource use and sustainable development.

Unit No.	Description	Lectures	Credits
I	Meaning and concept of Resources. Classification of resources : A. Natural and Man-made, B. Exhaustible and Non-exhaustible, C. Renewable and Non-renewable, D. Biotic (forests, wild-life, live-stock, fisheries, agricultural crops) and Abiotic (land, water, minerals).	**15**	**01**
II	Distribution and utilization of water, mineral and energy resources; their economic significance.	**10**	**01**
III	Types and distribution of forests; their economic significance. Major soil types and their distribution; problems of soil erosion.	**10**	**01**
IV	Conservation of resources: need and measures. Role of resources in sustainable economic development.	**10**	**01**

Reference Books

Sr. No.	Name of Books
1	Alexander, John W. : Economic Geography, Prentice Hall of India Ltd., New Delhi, 1988.
2	Berry, Conkling and Ray: Economic Geography, Prentice Hall of India Ltd., New Delhi, 1988.
3	Brown, L.P.: In The Human Interest, East-west Press, New Delhi, 1976.
4	Cutter, L. Renwick, H.L.: Exploitation, Conservation and Preservation : A Geographic perspective and Natural resources Use, Rowman and Allanheld, Totowa, new Jersey, 1985.
5	Hagget, Peter: Geography: A Modern Synthesis, Harper and Row Publishers, New York, 1975.
6	Janaki, V.A.: Economic Geography, Concept Publishing Co. New Delhi, 1985.
7	Liong, G.C. and Nmorgen, G.C.: Human and Economic Geography, Oxford University Press, London, 1982.
8	Reid, D.: Sustainable Development, Earthscan Pub., London, 1995.
9	Sharma, S.H. and Chattopadhyay, S.K.: Sustainable Developments – Concepts and Issues, Concept, New Delhi, 2000.
10	Simmons, I.G.: The Ecology of Natural resources, Edward Arnold, London, 1974.

Semester-IV
Sub-Geography (Practical Paper: VII)
Name of the paper: Remote Sensing and GIS

Code No- PG 2 **Course No-PG 211**
Total Mark- 100 (Credit-4) **Total Lectures- 90**

Objective:-

1) Make students familiar with concept of Remote Sensing and its use in present Geographic studies.
2) To give detailed knowledge about Aerial photography.
3) Make students familiar with concept of Geographical Information System.

Unit No.	Descriptions	No. of Lectures
I	Remote Sensing:-1.Concept of Remote Sensing, 2.Advantages and limitations of Remote Sensing, 3.Application of Remote Sensing in Geography	20
II	(1) Electromagnetic Radiation Energy and its interaction with atmospheric matter. (2) Remote Sensing: (a)Platforms, (b) Sensors, (c) Data products.	20
III	(1)Aerial Photography: (a) Types of Aerial photographs, (b) Scale And Resolution, (c) Difference between Topographic maps and Imageries & Aerial photographs. (2)Elements of Aerial photo interpretation. (3)Introduction to Image processing.	30
IV	Geographic Information System: (a) Definition, (b) Purpose, (c) Advantages and disadvantages, (d) Data Structure-Raster and Vector, (e) Components of GIS- Data input and Data Management	20
	Journal	

Exercises

Sr. No.	Exercises
1	Indexing of aerial photographs
2	Tracing with naked eyes.
3	Photogrammetry:- a) Determination of scale by various methods, b) Determination of height of object, c) Relief displacement and height determination, d) Introduction to parallax, parallax measurement and height determination, e) Determination of overlap Determination of photo coverage area and cost of photographs.
4	Interpretation and mapping of aerial photographs:- a) Land use and land cover, b) Relief and landforms, c) Significance of drainage, d) Cultural landscape mapping, e) Rock types lineament and structure.
5	Visual interpretation of satellite image:- a) Landuse, b) Landforms

Reference Books

Sr. No.	Name of Books
1	Barrett E.C. and L.F. Curtis (1992): Fundamentals of remote sensing and air photo interpretation – Mcmillon, New York
2	Curran Paul. J. (1985): Introduction of remotes sensing, londman, London.
3	Comphell J. (1989): Introduction to remote sensing, Fuildord, New York.
4	Lillesand I. M. and kiefer R. W. (1979): Remote sensing and image interpretation, John Willey & Sons New York
5	Leuder D.R. (1959): Areal Photographic interpretation, Mc grew Hill Book Company, New York.
6	Saini R. R. Kalwar S. C. (1991): Remote sensing in geography, pointer Publishers, Jaipur.
7	Sabins F. F. Jour (1987): Remote sensing principal of interpretation, (II edition) W.H. Freeman and Company, New York.
8	Ian, Haywood & others (2006): Geographical Information System, pearson Education, Inc., Delhi.
9	Jamwal, Anil K. (2008): Geographical Information System, Jnanada Prakashan, New Delhi.

Semester - IV

Sub – Geography (Practical Paper: VIII)

Name of the Paper – Project Report with Field Work

Code No. PG 2 **Course No: - PG 212**

Total Marks: - 70 Total Practical:-90

No. of Credits-04

Section I: Field Work

Unit No.	Description	Lectures
I	Significance of fieldwork in geography. Types of fieldworks (Macro, Meso and Micro), Importance of data, Types of data, methods of data collection, presentation and interpretation of data.	**20**
II	Importance of Sampling in Research, Types of Sampling methods, Format of project report, preliminary section, the text and reference Section, Style of writing, quotation, footnotes, reference and bibliography, figures and tables.	**30**

Section II: Project Report

Unit No.	Description	Lectures
I	The students individually or a batches of not exceeding 15 are required to select a problem for the project report. They are expected to carry out field work to generate primary data regarding the problem. By analyzing the data so evolved students should prepare a report and submit it in office for final examination and viva-voce	**40**

Reference Books

Sr. No.	Name of Books
1	Johnes P. A.: Field work in Geography, – Longman
2	Ahuja Ram, – Research Method
3	Kothari C. R. (1996): Research Methodology, – Vishwas Prakashan, NewDelhi
4	Misra R. P. (1991): Research Methodology in Geography, Concept publication New Delhi
5	Archet J. E. Dalton T. H. (1968): The field work in geography, Batsford Ltd., London.
6	Haming Lioyed (1975): Scientific Geographic Research, W C Brow Company U.S.A.
7	Borase: An Introduction of Research Method, (2005)
8	Hans Raj (1988): Theory and Practice in Social Research, Surjeet Publication, 7-K, Kolhapur