



Savitribai Phule Pune University

(Formerly University of Pune)

Three Year B.A. and B.Sc. Degree Program in Geography

(Faculty of Science & Technology)

S.Y.B.A. (Geography)

Choice Based Credit System Syllabus

To be implemented from Academic Year 2020-2021

| Semester | Core Courses | Paper No | Paper Code | Subject | Total Lecture | Credit |
|----------|--------------------|----------|------------|--|---------------|--------|
| III | Geography CC-1C | G2 | Gg: 201(A) | Environmental Geography I OR Economic Geography -I | 48 | 3 |
| | Geography DSE – 1A | S1 | Gg: 220(A) | Geography of Maharashtra - I OR Population Geography – I | 48 | 3 |
| | Geography DSE – 2A | S2 | Gg: 210(A) | Practical Geography – I (Scale and Map Projections) | 60 | 4 |
| | SEC-I SEC -2A | | SEC - A | Introduction to Geographical Information System (GIS) / Applied Course of Disaster Management | 30 | 2 |
| IV | Geography CC-1C | G2 | Gg: 201(B) | Environmental Geography II OR Economic Geography -II | 48 | |
| | Geography DSE – 1B | S1 | Gg: 210(B) | Geography of Maharashtra – II OR Population Geography – II | 48 | 3 |
| | Geography DSE – 2B | S2 | Gg: 220(B) | Practical Geography – II (Cartographic Techniques, Surveying and Excursion / Village / Project Report) | 60 | 4 |
| | SEC-I SEC -2B | | SEC - B | & Introduction to Remote Sensing / Applied Course of Travel & Tourism | 30 | 2 |

S. Y. B. A. GEOGRAPHY**Equivalence of Previous syllabus along with new syllabus:**

| Pager | Old Course (2013 Annual Pattern) | New Course (2019 Semester Pattern) |
|--------------|---|--|
| G2 | Gg-210 Elements of Climatology and Oceanography OR | Gg: 210(A)Environmental Geography I OR Gg: 210(A)Economic Geography -I |
| G2 | Gg-210 Geography of Disaster Management | Gg: 210(B)Environmental Geography II OR Gg: 210(B)Economic Geography -II |
| S1 | Gg-220 Economic Geography OR | Gg: 220(A)Geography of Maharashtra - I OR Gg: 220(A) Population Geography – I |
| S1 | Gg-220 Tourism Geography | Gg: 220(B) Geography of Maharashtra – II OR Gg: 220(B) Population Geography – II |
| S2 | Gg-201 Fundamentals of Geographical Analysis | Gg: 201(A)Practical Geography – I (Scale and Map Projections) |
| S2 | | Gg: 201(B)Practical Geography – II (Cartographic Techniques, Surveying and Excursion / Village / Project Report) |

S.Y.B.A. Geography (G2) Syllabus for Semester III**Name of Subject: Environment Geography- I, Subject Code: Gg.210 (A)****Objectives:**

1. To create the awareness about dynamic environment among the student.
2. To acquaint the students with fundamental concepts of environment geography for development in different areas.
3. The students should be able to integrate various factors of Environment and dynamic aspect of Environmental geography.
4. To make aware the students about the problems of environment , their utilization and conservation in the view of sustainable development

| Sr. No. | Topic | Sub Topics | Teaching Hours | Total Credits |
|----------------|---|---|-----------------------|----------------------|
| 1 | Introduction to Environmental Geography | 1. Definition, Nature and scope of Environmental Geography. 2. Types of Environment 3. Importance of Environmental Geography 4. Approaches to study of environmental Geography | 12 | 03 |
| 2 | Ecosystem | 1. Meaning, concept and definition of ecosystem. 2. Structure (Biotic and Abiotic factors) and food chain, Tropic Level, food web, energy flow | 12 | |

| | | | | |
|---|-----------------------------------|---|----|--|
| | | 3. Types of ecosystem a) Equatorial Forest and b) Pond Ecosystem | | |
| 3 | Biodiversity and its conservation | 1. Concept of biodiversity 2. Economic value and potential of biodiversity 3. Loss of biodiversity and hotspots in India 4. Conservation of biodiversity | 12 | |
| 4 | Environmental Pollution | 1. Concept of Pollution 2. Air pollution-Causes, effects and control measures 3. Water pollution-Causes, effects and control measures 4. Soil pollution-Causes, effects and control measures | 12 | |

Reference Book:

1. Miller G.T., 2004, Environmental Science Working with the Earth, Thomson Books Cole, Singapore
2. Saxena H.M., 2017, Environmental Geography(Ed III), Rawat Publicastions, Jaipur
3. Odum E.P. et al.2005, Fundamentals of Ecology, Ceneage Learning, India
4. Sharma P.D.2015, Ecology and Environment, Rastogi Publications,Meerut
5. Kormondy, Edward J, 2012, Concept of Ecology, PHI Learning Pvt.Ltd,New Delhi
6. Singh R.B.(Eds) 2009, Biogeography and Biodiversity, Rawat Publications, Jaipur
7. Singh S,Prayag, 1997, Environment Geography, Pustak Bhawan, Allahabad
8. Chandana R.C.2002, Environmental Geography, Kalyani Publication, Ludhiana
9. Goudie A, 2001, The Nature of The Environment, Blackwell ,Oxford
10. Gholap T. N., 2000, Environment Science, Nishikant Publications, Pune. (Marathi)
11. Choudhar A.H., & et. al., 2014, Disaster Management, Atharva Publication, Pune. (Marathi)
12. Musmade A. H., More J. C. 2014, Geography of Disaster Management, Diamond Publication, Pune. (Marathi)
13. Saptarshi P. G., More J. C., Ugale V. R., 2009, Geography and Natural Hazads, Diamond Publishing, Pune. (Marathi)

S.Y.B.A. Geography (G2) Syllabus for Semester IV**Name of Subject: Environment Geography- II, Subject Code: Gg.210 (B)****Objectives:**

1. To create awareness about dynamic environment among the students.
2. To acquaint students with the fundamental concepts of Environment Geography.
3. To acquaint students about the past, presents and future utility and potentials of natural resources.
4. To make aware students about the problems of environment, its utilization and conservation in the view of sustainable development.

| Sr. No. | Topic | Sub Topics | Teaching Hours | Total Credits |
|---------|---------------------------------------|--|----------------|---------------|
| 1 | Environmental Disaster | 1. Meaning and concepts of environmental disaster 2. Classification of Disaster 3. Natural Disaster a) Earthquake b) Flood 4. Biological Disaster a) Swine flu b) Novel Corona (COVID-19) | 12 | 03 |
| 2 | Environmental Problems | 1. Global Warming and climate change 2. Ozone Depletion 3. Acid rain 4. Over use of chemical fertilizers, pesticides and insecticides | 12 | |
| 3 | Environmental Planning and Management | 1. Need of Planning and Management 2. Micro, macro and meso level Planning and Management with reference to India 3. Environmental impact assessment | 12 | |
| 4 | Environmental Policies | 1. Introduction of environmental policies 2. Environmental education in India 3. Kyoto Protocol | 12 | |

Reference Book:

1. Miller G.T., 2004, Environmental Science Working with the Earth, Thomson Books Cole, Singapore
2. Saxena H.M., 2017, Environmental Geography,(III ED) Rawat Publicastions, Jaipur
3. Odum E.P. et al.2005, Fundamentals of Ecology, Ceneage Learning, India
4. Sharma P.D.2015, Ecology and Environment, Rastogi Publications,Meerut
5. Kormondy, Edward J, 2012, Concept of Ecology, PHI Learning Pvt. Ltd, New Delhi
6. Singh R.B.(Eds) 2009, Biogeography and Biodiversity, Rawat Publications, Jaipur
7. Singh S,Prayag, 1997, Environment Geography, Pustak Bhawan, Allahabad
8. Chandana R.C.2002, Environmental Geography, Kalyani Publication, Ludhiana
9. Goudie A, 2001, The Nature of The Environment, Blackwell ,Oxford
10. Gholap T. N., 2000, Environment Science, Nishikant Publications, Pune. (Marathi)
11. Choudhar A.H., & et. al., 2014, Disaster Management, Atharv Publication, Pune. (Marathi)
12. Musmade A. H., More J. C. 2014, Geography of Disaster Management, Diamond Publication, Pune. (Marathi)
13. Saptarshi P. G., More J. C., Ugale V. R., 2009, Geography and Natural Hazads, Diamond Publishing, Pune. (Marathi)

S.Y.B.A. Geography (G2) Syllabus for Semester III**Name of Subject: Economic Geography- I, Subject Code: Gg.210 (A)****Objectives:**

1. To introduce students to the basic principles and concepts of economic geography
2. To acquaint students with the applications to economic geography for development in different areas
3. The students should be able to integrate various factors of economic development and dynamic aspect of economic geography.

| Sr. No. | Topic | Sub Topics | Teaching Hours | Total Credits |
|---------|---|--|----------------|---------------|
| 1 | Introduction to Economic Geography | <ol style="list-style-type: none"> 1. Definition, nature and scope of economic geography. 2. Need and significance of economic geography 3. Economic geography and its relation with social sciences 4. Approaches of the study of economic geography | 12 | 03 |
| 2 | Economic Activity | <ol style="list-style-type: none"> 1. Introduction and concept of economic activity with problems and prospect 2. Primary activity 3. Secondary activity 4. Tertiary activity | 12 | |
| 3 | Concept and classification of resources | <ol style="list-style-type: none"> 1. Concept of resources 2. Renewable energy Resources <ol style="list-style-type: none"> i. Hydro electricity ii. Solar energy iii. Wind energy 3. Non-renewable Resources <ol style="list-style-type: none"> i. Coal, ii. Iron ore iii. Mineral oil 4. Conservation of resources | 12 | |
| 4 | Agriculture | <ol style="list-style-type: none"> 1. Role of Agriculture in Indian economy 2. Factors influencing agriculture in India <ol style="list-style-type: none"> a) Physical b) Socio-economic c) Political and cultural 3. Agro-based industries in India <ol style="list-style-type: none"> a) Dairy industry b) Cotton industry 4. Agro –Tourism | 12 | |

Reference Books :

1. Gautam A., 2010, Advance Economic Geography, Sharda Pustak Bhavan, Allahabad
2. Chauhan R. N., 2007, Basic Principles of Economic Geography, ABD Publishers, Jaipur
3. Padey P. N., Economic Geography, Nirali Publication ,Pune
4. Sadhukhan S. K., 1994, Economic Geography An Appraisal of Resources, S Chand & Company Ltd ,New Delhi
5. Roy P., Mukherjee S., 1993, Economic Geography: Resource Appraisal of resources- New Central Book Agency, Calcutta
6. Mannur H. G., 2008, International Economics, Vikas Publishing House PvtLtd,Noida
7. Siddharth K., 2003, Economic Geography, Theories, Processes &Patterns, Kosalaya Publications Pvt, Ltd, Noida
8. Husain M., 2008, Geography of India, Tata McGraw Hill, New Delhi
9. Bhat L. S., 1973, Regional Planning in India, Statistical Publishing Society, Kolkata
10. Desai V,1991, Fundamentals of Rural Development, Rawat Publications, New Delhi
11. Paranjape, Gupte, Karmarkar, 1974, Economic & Commercial Geography, Nirali Publication, Pune.
12. More J. C., 2014, Geography & Agriculture For MPSC Examination, Atharv Publication, Pune
13. Pagar S.D., Thorat A. M., More J. C., 2015, Agriculture Geography, Atharav Publication, Pune.

S.Y.B.A. Geography (G2) Syllabus for Semester IV**Name of Subject: Economic Geography- II, Subject Code: Gg.210 (B)****Objectives:**

1. To acquaint students with the basic principles and concepts of economic geography
2. To acquaint the students with the applications to economic geography for development in different areas.
3. The main aims are to integrate the various factors of economic development and to acquaint the students with this dynamic aspect of economic geography.

| Sr.No. | Topic | Sub Topics | Teaching Hours | Total Credits |
|--------|-------------------------------|--|----------------|---------------|
| 1 | Trade and Transport | 1.Modes of Transportation and their cost effectiveness Significance of a) Road b) Rail c) Air 2.Treansportation cost of Major types 3,Types of Trade a) National b) International 4.International trade of India | 12 | 03 |
| 2 | Industries | 1. Factors influencing on location of industries. 2. Weber's theory of industrial location 3. Major industrial regions in India 4. a) Iron and steel industry in India b) Sugar Industry in Maharashtra | 12 | |
| 3 | Regional Planning Development | 1. Concept of regional planning and development. Their importance 2. Objectives of regional planning 3. Regional and sectoral imbalance in India | 12 | |
| 4 | Rural Development in India | 1. Concept of rural development 2. Index of rural development 3. Various schemes of government for rural development a) IRD Programme b) DPAD Programme | 12 | |

Reference Books :

1. Gautam A., 2010, Advance Economic Geography, Sharda Pustak Bhavan, Allahabad
2. Chauhan R. N., 2007, Basic Principles of Economic Geography, ABD Publishers, Jaipur
3. Padey P. N., Economic Geography, Nirali Publication ,Pune
4. Sadhukhan S. K., 1994, Economic Geography An Appraisal of Resources, S Chand &Company Ltd ,New Delhi
5. Roy P., Mukherjee S., 1993, Economic Geography: Resource Appraisal of resources- New Central Book Agency, Calcutta
6. Mannur H. G., 2008, International Economics, Vikas Publishing House Pvt Ltd, Noida
7. Siddharth K., 2003, Economic Geography, Theories, Processes & Patterns, Kosalaya Publications Pvt, Ltd, Noida
8. Husain M., 2008, Geography of India, Tata McGraw Hill, New Delhi
9. Bhat L. S., 1973, Regional Planning in India, Statistical Publishing Society, Kolkata
10. Desai V,1991, Fundamentals of Rural Development, Rawat Publications, New Delhi
11. Paranjape, Gupte, Karmarkar, 1974, Economic & Commercial Geography, Nirali Publication, Pune.
12. More J. C., 2014, Geography & Agriculture For MPSC Examination, Atharv Publication, Pune
13. Pagar S.D., Thorat A. M., More J. C., 2015, Agriculture Geography, Atharav Publication, Pune.

S.Y.B.A. Geography (S1) Syllabus for Semester III**Name of Subject: Population Geography, Subject Code: Gg.220 (A)****Objectives:**

1. To understand the history of population.
2. To introduction of the basic concepts in Population Geography.
3. To understand the types of Population data.

| Sr. No. | Topic | Sub Topics | Teaching Hours | Total Credits |
|---------|--|---|----------------|---------------|
| 1 | Introduction | 1. Definition, Nature and Scope, 2. Contextual significance of Population Geography, 3. Relation between Population Geography and other social Sciences. | 12 | 03 |
| 2 | Population Data & Presentation | 1. Census of India 2. National Sample Survey, Sample Registration Survey, NFHS, DLHS, 3. Presentation of Population Data – Maps, Graphical Presentation, Computer Application | 12 | |
| 3 | Population Growth and Demographic Attributes | 1. Factors affecting Growth of Population 2. Fertility, Mortality - (Concept, Measurement) 3. Migration - Concept, Causes, Types | 12 | |
| 4 | Composition of Population | 1. Age-Sex pyramid, Age Structure 2. Occupational Structure, Dependency Ratio 3. Longevity, Life Expectancy. (with Reference to India) | 12 | |

Reference Books:

1. Barrett H. R., 1995, Population Geography, Oliver and Boyd Publication,
2. Bhende A. and Kanitkar T., 2000, Principles of Population Studies, Himalaya Publishing House.
3. Chandna R. C. and Sidhu M. S., 1980, An Introduction to Population Geography, Kalyani Publishers.
4. Clarke J. I., 1965, Population Geography, Pergamon Press, Oxford.
5. Jones, H. R., 2000, Population Geography, 3rd ed., Paul Chapman, London.
6. Lutz W., Warren C. S. and Scherbov S., 2004, The End of the World Population Growth in the 21st Century, Earth scan
7. New bold K. B., 2009, Population Geography Tools and Issues, Rowman and Littlefield Publishers.
8. Pacione M., 1986, Population Geography-Progress and Prospect, Taylor and Francis.
9. Wilson M. G. A., 1968, Population Geography, Nelson Publishers.
10. Panda B P , 1988, Population Geography, Granth Academy, Bhopal (Hindi)
11. Maurya S D, 2009, Population Geography, Sharda Putak Bhawan, Allahabad (Hindi)
12. Chandna, R C, 2006, Population Geography, Kalyani Publishers, Delhi. (Hindi)
13. Sawant, Athavale, Musmade, Population Geography, Mehta Pubication, Pune. (Marathi)
14. More J. C., 2014, Geography & Agriculture For MPSC Examination, Atharv Publication, Pune (Marathi)
15. Musmade A.H., Sonawane A.E., More J.C., 2015, Population & Settlement Geography, Diamond Publication Pune. (Marathi)

S.Y.B.A. Geography (S1), Syllabus for Semester IV**Name of Subject: Population Geography, Subject Code: Gg.220 (B)****Objectives:**

1. To introduce students to the Population Policy of India and China.
2. To understand the Health indicator in India.
3. To acquaint students with the concept of urbanization in population geography.
4. To understand population theories.

| Sr. No. | Topic | Sub Topics | Teaching Hours | Total Credits |
|---------|---|--|----------------|---------------|
| 1 | Concept and theories of Population | 1. Population and space: over Population, Optimum Population, Under Population 2. Malthusian Theory 3. Marxian Theory | 12 | 03 |
| 2 | Problems of Population and Population Polices | 1. Population Problems in India. 2. Population Problems in developed countries 3. Population Policies in India and China | 12 | |
| 3 | Population as a Resources Contemporary Issues | 1. Health Indicator in India 2. Population as Social Capital 3. Human Development Index. | 12 | |
| 4 | Urbanization | 1. Concept of urbanization 2. History of urbanization in India, Trends of World urbanization. 3. Problems of Urbanization in India | 12 | |

Reference Books:

1. Barrett H. R., 1995, Population Geography, Oliver and Boyd Publication,
2. Bhende A. and Kanitkar T., 2000, Principles of Population Studies, Himalaya Publishing

House.

3. Chandna R. C. and Sidhu M. S., 1980, An Introduction to Population Geography, Kalyani Publishers.
4. Clarke J. I., 1965, Population Geography, Pergamon Press, Oxford.
5. Jones, H. R., 2000, Population Geography, 3rd ed., Paul Chapman, London.
6. Lutz W., Warren C. S. and Scherbov S., 2004, The End of the World Population Growth in the 21st Century, Earth scan
7. New bold K. B., 2009, Population Geography Tools and Issues, Rowman and Littlefield Publishers.
8. Pacione M., 1986, Population Geography-Progress and Prospect, Taylor and Francis.
9. Wilson M. G. A., 1968, Population Geography, Nelson Publishers.
10. Panda B P , 1988, Population Geography, Granth Academy, Bhopal (Hindi)
11. Maurya S D, 2009, Population Geography, Sharda Putak Bhawan, Allahabad (Hindi)
12. Chandna, R C, 2006, Population Geography, Kalyani Publishers, Delhi. (Hindi)
13. Sawant, Athavale, Musmade, Population Geography, Mehta Publication, Pune. (Marathi)
14. More J. C., 2014, Geography & Agriculture For MPSC Examination, Atharv Publication, Pune (Marathi)
15. Musmade A.H., Sonawane A.E., More J.C., 2015, Population & Settlement Geography, Diamond Publication Pune. (Marathi)

S.Y.B.A. Geography (S1), Syllabus for Semester III**Name of Subject: Geography of Maharashtra, Subject Code: Gg.220 (A)****Objectives:**

1. To acquaint students with Geography of our State.
2. To make students aware of the magnitude of problems and prospects in Maharashtra.
3. To help students understand the inter relationship between the subject and the society.
4. To help students understand the recent trends in regional studies

| Sr. No. | Topic | Sub Topics | Teaching Hours | Total Credits |
|---------|--------------------------------------|---|----------------|---------------|
| 1 | Administrative Set up of Maharashtra | <ol style="list-style-type: none"> 1. Historical and Political Background of the state 2. Geographical location of State 3. Adjoining States 4. Administrative Divisions | 12 | 03 |
| 2 | Physical settings | <ol style="list-style-type: none"> 1. Geological Structure of Maharashtra. 2. Physical Structure (Mountain, plateau, Plains) 3. Drainage Pattern (East and West flowing rivers) 4. Major Soil types and Distribution. | 12 | |
| 3 | Climate | <ol style="list-style-type: none"> 1. Climatic Regions of Maharashtra 2. Distribution of Rainfall 3. Draught prone areas- Problems and Management 4. Flood areas - Problems and Management | 12 | |
| 4 | Resources | <ol style="list-style-type: none"> 1. Water :Problems in Utilization and conservation 2. Forest : Types and Conservation 3. Mineral; Iron ore, Manganese and Bauxite 4. Power : Hydro, Thermal, Atomic | 12 | |

Reference Book:

1. Dikshit K.R ., Maharashtra in Maps,
2. Deshpande C. D. , Maharashtra
3. Sadhu Arun, Maharashtra, National Book Trust
4. Savadi A. B., Geography of Maharashtra: Nirali Prakashan, Pune.
5. Dastane S., Maharashtra, Ramchandra and company, Pune
6. Sawadi A. B., The Mega State Series : Nirali Publication, Pune.
7. Maharashtra state Agricultural Atlas
8. Karve I., Maharashtra its Land and people,
9. More J. C., 2014, Geography & Agriculture For MPSC Examination, Atharv Publication, Pune (Marathi)

S.Y.B.A. Geography (S1), Syllabus for Semester IV**Name of Subject: Geography of Maharashtra, Subject Code: Gg.220****(B)Objective :**

1. To make students aware about the Agriculture problems and prospects of Maharashtra.
2. To understand the population distribution and settlement pattern in Maharashtra.
3. To understand the concept of rural development.
4. To understand the prospectus in Tourism activity in Maharashtra and the role of MTDC and Role of MIDC in industrial development in rural area of Maharashtra

| Sr. No. | Topic | Sub Topic & Learning Point | Hours | Credits |
|---------|----------------------------------|---|-------|---------|
| 1 | Agriculture | <ol style="list-style-type: none"> 1. Importance of Agriculture in Economy of Maharashtra 2. Major Crops - Wheat, Rice, Jawar, Bajra. 3. Cash Crops and Horticulture - Cotton, Sugarcane, Pomegranate, Grapes. 4. Problems of agriculture in Maharashtra. | 12 | 03 |
| 2 | Population and Settlement | <ol style="list-style-type: none"> 1. Population distribution of Maharashtra 2. Population composition - Sex Ratio, Literacy, Occupational structure, Migration 3. Rural and Urban Settlements 4. Potential of Major Cities in Maharashtra – Mumbai, Pune, Nagpur | 12 | |
| 3 | Rural Development of Maharashtra | <ol style="list-style-type: none"> 1. Concept of Rural Development 2. Parameters of Rural Development 3. Schemes For Rural Development 4. Case Studies – Hivare Bazar and Ralegan Siddhi (Ahmednagar), Patoda (Aurangabad) | 12 | |
| 4 | Tourism | <ol style="list-style-type: none"> 1. Growth and development of tourism in Maharashtra 2. Tourism Potential of Maharashtra 3. Agro-Tourism 4. Role of MTDC | 12 | |

Reference Book:

1. Dikshit K.R ., Maharashtra in Maps,
2. Deshpande C. D. , Maharashtra
3. Sadhu Arun, Maharashtra, National Book Trust
4. Savadi A. B., Geography of Maharashtra: NiraliPrakashan, Pune.
5. Dastane S., Maharashtra, Ramchandra and company, Pune
6. Sawadi A. B., The Mega State Series : Nirali Publication, Pune.
7. Maharashtra state Agricultural Atlas
8. Karve I., Maharashtra its Land and people,
9. More J. C., 2014, Geography & Agriculture For MPSC Examination, Atharv Publication, Pune (Marathi)

S.Y.B.A. Geography (S2), Syllabus for Semester III**Name of the Subject: Scale and Map Projection, subject Code: Gg. 201 (A)****Practical Geography-I No. of Credits: 04**

Workload: Six Periods per week per batch consisting of 12 Students; however the last batch needs to have more than six students.

(Examination for the course will be conducted at the end of the semester)

Objectives of Course:

1. To introduce the basic concepts in Practical Geography
2. To enable students to use various Scales and Projection Techniques in Geography.
3. To acquaint students with the utility of various Projections in Geographical knowledge.
4. To explain the elementary and essential principles of practical work in Geography.

Course Outcome:

After the successful completion of the course, the students will be able to:

1. Develop practical skill and use of map scale and projection.
2. To make students aware of the new techniques, accuracy and skills of map making.

Note:

1. Use of Map stencils, Log tables, Calculator, computer, Statistical Tables is allowed at the time of Examination.
2. Students must check the practical's regularly and Journal should be certified by practical in-charge and Head of the Department before the examination.
3. Students without a certified journal should not be allowed for the practical examination.
4. Each of the practical batches needs a separate question paper.

| Sr. No. | Topic | Sub Topic & Learning Point | No of Practical | Credits |
|---------|--|---|-----------------|-----------|
| 1. | Introduction of Maps | 1. Definition of Map 2. Elements of Map 3. Classification of Map: a. On the basis of scale: i) Small scale ii) Large Scale b. On the basis of function: i) Physical ii) Cultural 4. Use of map | 03 | 04 |
| 2. | Map Scale | 1. Definition of Map Scale. 2. Types of Map Scale a. Verbal Scale b. Numerical Scale c. Graphical Scale 3. Conversion Scale (British and Metric System) a. Verbal scale to Representative fraction b. Representative fraction into Verbal scale 4. Construction of Simple Graphical scale (At least two examples from each) | 06 | |
| 3. | Basic of map projection | 1. Definition and types of map projection 2. Basic Concepts of Projection: Latitude, Longitude, Parallel of latitude, Meridian of longitude, Prime meridian, Equator, Direction 3. Calculation of time basis on meridian and GMT (Calculation of minimum two examples) | 04 | |
| 4. | Construction, properties and use of map projections | 1. Zenithal Projection a. Zenithal Polar Gnomonic Projection 2. Conical Projection a. Conical projection with one standard parallel/Simple conical projection 3. Cylindrical Projection a. Cylindrical equal area projection 4. Mercator projection (At least two examples from each projection) | 07 | |

Reference Books:

1. Sharma J. P., 2010, Prayogic Bhugol, Rastogi Publishers, Meerut.
2. Singh R. L. and Singh R. P. B., 1999, Elements of Practical Geography, Kalyani Publishers.
3. Slocum T. A., McMaster R. B. and Kessler F. C., 2008, Thematic Cartography and Geovisualization (3rd Edition), Prentice Hall.
4. Tyner J. A., 2010, Principles of Map Design, The Guilford Press.
5. Sarkar A., 2015, Practical Geography: A Systematic Approach, Orient Black Swan Private Ltd., New Delhi
6. Singh R. L. and Duttta P. K., 2012, Prayogatama Bhugol, Central Book Depot, Allahabad
7. Ahirrao Y., Karanjkehele E. K., 2002, Practical Geography, Sudarshan Publication, Nashik
8. Saptarshi P. G., Jog S. R., Statistical Methods ,
9. Karlekar S. N., 2008, Statistical Methods, Diamond Publication, Pune
10. Kanetkar T. P., Kulkarni S. V., 1986, Surveying and Leveling, Pune Vidyarthi Griha Publication, Pune
11. Kumbhare A., Practical Geography,
12. Saha P., Basu P., 2007, Advanced Practical Geography, Books and Allied (P) Ltd, Kolkata

S.Y.B.A. Geography (S2), Syllabus for Semester IV

**Name of the Subject: Cartographic Techniques, Surveying and Excursion
/ Village / Project Report subject Code: Gg. 201 (B)
Practical Geography-II No. of Credits: 04**

Workload: Six Periods per week per batch consisting of 12 Students; however the last batch needs to have more than six students.

(Examination for the course will be conducted at the end of the semester)

Objectives of Course:

1. To introduce the students to the basic and contemporary concepts in Cartography.
2. To acquaint the students with the utility and applications of various Cartographic Techniques.
3. To introduce the latest concepts regarding the modern cartography in the field of Geography.
4. To explain the elementary and essential principles of practical work in Geography.

Course Outcome:

After the successful completion of the course, the students will be able to:

1. Develop practical knowledge and application of cartographical techniques.
2. To make students aware of the new techniques, accuracy and skills of Map Making.

Note :

1. Use of Map stencils, Log tables, Calculators, Statistical Tables is allowed at the time of Examination.
2. Journal completion by the students and the certified by practical in-charge and Head of the Department is compulsory.
3. Students without a certified journal should not be allowed for the practical examination.
4. Each of the practical batches needs a separate question paper.

| Sr. No. | Topic | Sub Topic & Learning Point | No of Practical | Credits |
|---------|---|--|-----------------|---------|
| 1. | Introduction to Cartography | 1. Definition of Cartography 2. Development of cartography a. Traditional b. Modern 3. Use of Cartography | 02 | 04 |
| 2. | Cartographic techniques | 1. Techniques of representation of data (Use and limitations) a. Simple line graph b. Simple bar Graph c. Pie diagram d. Choropleth Map e. Isopleth Method (Isoheight or Isothermal) f. Flow diagram (At least 01 example of each manually and using computer) | 06 | |
| 3. | Surveying | 1. Definition of Surveying 2. Types of North Direction (True, Magnetic and Grid North) 3. Types of Survey (Any three) a. Plane Table Survey : (Radiation Method and Intersection Method) b. GPS Survey and plotting c. Dumpy level / Auto level survey i) Rise and Fall Method ii) Collimation Method d. Demonstration of Total Station 4. Measurement of land: i) Measurement of survey field ii) Example on measurement of area (Circle, Square, Rectangle, Triangle, Uneven shape) iii) Conversion of area (hector into Acer, Square km into square meter, Square meter to Square feet) | 08 | |
| 4. | Excursion / village/city survey and report writing | Study tour to places of geographical interest anywhere in the country Or Socio- economic survey of village/city | 04 | |

Reference Books:

1. Sharma J. P., 2010, Prayogic Bhugol, Rastogi Publishers, Meerut.
2. Singh R. L. and Singh R. P. B., 1999, Elements of Practical Geography, Kalyani Publishers.
3. Slocum T. A., McMaster R. B. and Kessler F. C., 2008, Thematic Cartography and Geovisualization (3rd Edition), Prentice Hall.
4. Tyner J. A., 2010, Principles of Map Design, The Guilford Press.
5. Sarkar A., 2015, Practical Geography: A Systematic Approach, Orient Black Swan Private Ltd., New Delhi
6. Singh R. L. and Duttta P. K., 2012, Prayogatama Bhugol, Central Book Depot, Allahabad
7. Ahirrao Y., Karanjkehele E. K., 2002, Practical Geography, Sudarshan Publication, Nashik
8. Saptarshi P. G., Jog S. R., Statistical Methods ,
9. Karlekar S. N., 2008, Statistical Methods, Diamond Publication, Pune
10. Kanetkar T. P., Kulkarni S. V., 1986, Surveying and Leveling, Pune Vidyarthi Griha Publication, Pune
11. Kumbhare A., Practical Geography,
12. Saha P., Basu P., 2007, Advanced Practical Geography, Books and Allied (P) Ltd, Kolkata
13. Advanced Practical Geography: 2007, Saha P., Basu P., Books and Allied (P) Ltd, Kolkata

S.Y.B.A. Geography Syllabus**Name of Subject: Introduction to Geographic Information System****Subject Code: SEC – A, Semester – III****Total Credit:02,****Total Periods: 30****Objectives:**

1. To introduce the students about the basic concepts of GIS.
2. To acquaint the students with the utility and applications of GIS Technique.
3. To create the awareness about Geospatial technology among the students.
4. To inculcate skill of map making among the students by using GIS Technique.

| Sr. No. | Topic | Sub Topics | Teaching Hours | Total Credits |
|---------|--------------------------|--|----------------|---------------|
| 1 | Introduction to GIS | 1. Definition of GIS 2. Stages of GIS Development 3. Objectives of GIS 4. Components GIS 5. GIS Applications | 06 | 2 |
| 2 | Data Types & Models | 1. Spatial Data – Concept, Sources; Data Models – Raster & Vector 2. Non-spatial Data – Concept, Sources; Data Models – Relational, Network, Hierarchical & Object-orientated | 06 | |
| 3 | Software based Practical | 1. Geo-referencing of Toposheet/Map 2. Digitization of Point, Line & Polygon (at least one layer of each) 3. Data Attachment 4. Creation of Layout and Map | 18 | |

Course Outcomes:

On successful completion of this course, the students will be able to -

- Comprehend knowledge about the concepts in GIS.
- Acquire skills of map making using GIS.

Reference Books:

- Burrough, P. A. and McDonnell, R. A. (2000): Principles of Geographical Information Systems, Oxford University Press, New York.
- Chang, K. T. (2008): Introduction to Geographic Information Systems, Avenue of the Americas, McGraw-Hill, New York.
- Debashis, C. and Sahoo, R. N. (2015): Fundamentals of Geographic Information System, Viva Books Private Limited.
- DeMers, M. N. (2008): Fundamentals of Geographic Information Systems, John Wiley and Sons, New Delhi.
- Heywood, I., Cornelius, S. and Carver, S. (2011): An Introduction to Geographical Information Systems, Pearson Education, New Delhi.
- Karlekar, S. (2007): Bhaugolik Mahiti Pranali (GIS), Diamond Publications, Pune.
- Korte, G. B. (2001): The GIS Book, Onward Press, Bangalore.
- Longley, P. A., Goodchild, M. F., Maguire, D. J. and Rhind, D. W. (2002): Geographical Information Systems and Science, John Wiley & Sons, Chichester.
- Lo Albert, C. P., Yeung and Albert K. W. (2002): Concepts and Techniques of Geographical Information Systems, Prentice Hall of India, New Delhi.
- Pandey, J. and Pathak D. (2015): Geographic Information System, TERI Press, The Energy and Resources Institute, New Delhi.
- Paul, A. L., Michel, F. G., Maguire, D. J. and Rhind, D.W. (2002): Introduction to Geographic Information Systems and Science, John Wiley and Sons Ltd.

S.Y.B.A. Geography Syllabus

Name of Subject: APPLIED COURSE OF DISASTER MANAGEMENT

Subject Code: SEC – A Semester - III

Objectives:

The objectives of the course are to develop following Skills among the students

- 1.To introduce basic concepts and fundamental structure of Disaster Management (DM).
- 2.To inculcate critical thinking and problem-solving abilities on disaster management.
- 3.To enable students to assess the situation and design plan for Disaster management

| Unit no. | Topic | Sub Topics | Teaching Hours | Total Credits |
|----------|--|---|----------------|---------------|
| 1 | Fundamental Concepts, Measurement / Parameter and Types of Disasters | a) Disaster, Hazard, Risk, Vulnerability, Resilient b) Magnitude, Intensity, Frequency, Duration, Spatial dispersion c) Natural Disaster and Man- Made Disaster (Types and Definition) | 06 | 02 |
| 2 | Phases of Disaster Management Role of Geographers and organizations | a) Concept: Mitigation, Preparedness, Response, Recovery, Rehabilitation. b) Role of Geographers: Approaches; Application of GIS and RS in DM c) Introduction to National, State level organisations and Role of District level organisation. | 08 | |
| 3 | Comparative Assessment of Disaster Management- I | a) Earthquake: - India and Japan b) Flood:- India and Netherland c) COVID-19: India and Germany | 08 | |
| 4 | Assessment of Disaster Management- II | Assignment based on Primary or secondary data on any one Geographical scale- local/ regional/national/ global | 08 | |

1. Disaster Management Guidelines, GOI-UND Disaster Risk Program (2009-2012)
2. Damon, P. Copola, (2006) Introduction to International Disaster Management, Butterworth Heineman.
3. Gupta A.K., Niar S.S and Chatterjee S. (2013) Disaster management and Risk Reduction, Role of Environmental Knowledge, Narosa Publishing House, Delhi.
4. Murthy D.B.N. (2012) Disaster Management, Deep and Deep Publication PVT. Ltd. New Delhi.
5. Modh S. (2010) Managing Natural Disasters, Mac Millan publishers India LTD.
6. Dr. Mrinalini Pandey (2017) Disaster Management, Wiley India Pvt. Ltd.

7. Tushar Bhattacharya (2018) Disaster Science and Management, McGraw Hill Education (India) Pvt. Ltd.

9. Arjun Musmade, Jyotiram More (2014) Geography of Disaster Management, Diamond Publication, Pune. (Marathi)

10. P. P. Marathe (2010), Disaster Management Concepts & Practices Diamond Publication, Pune. (Marathi)

S.Y.B.A. Geography Syllabus

Name of Subject: Introduction to Remote Sensing

Subject Code: SEC-B Semester – IV

Total Credit:02,

Total Periods: 30

Objectives:

1. To introduce the students about the basic concepts of Remote Sensing.
2. To acquaint the students with the utility of RS and its applications.
3. To inculcate the skill of satellite image interpretation among the students.

| Sr. No. | Topic | Sub Topics | Teaching Hours | Total Credits |
|---------|--------------------------------|--|----------------|---------------|
| 1 | Introduction to Remote Sensing | 1. Concept, Definition and Types of RS 2. Development of RS in India 3. Stages in RS 4. Electromagnetic Spectrum 5. Applications of RS | 07 | 2 |
| 2 | Image Interpretation | 1. Elements of Visual Image Interpretation 2. Visual Image Interpretation of Satellite Images i.e. IRS and LANDSAT | 07 | |
| 3 | Software based Practical | 1. Image Downloading through Bhuvan/USGS 2. Layer Stacking 3. Image Enhancement 4. Image Classification - Unsupervised | 16 | |

Course Outcomes:

On successfully completion of this course, the students will able to -

- Obtain knowledge about the concepts of remote sensing.
- Acquire skills in visual interpretation of satellite images.

Reference Books:

- Anji Reddy, M. (2008): Textbook of Remote Sensing and Geographic Information System, B.S. Publication, Hyderabad.
- Bhatta B., (2011): Remote Sensing and GIS, Oxford University Press, India.
- Campbell, J. (2002): Introduction to Remote Sensing, Taylor & Francis, London.
- Cracknell, A.P. (1991): Introduction to Remote Sensing, Tylor & Francis, London.
- Gupta, R.P. (1990): Remote Sensing Geology. Springer Verlag.
- Heywood, I., Steve, C. and Cornelius, S. (2003): An Introduction to Geographical Information Systems, Pearson Education.

- Jensen, J. R. (2000): Remote Sensing of the Environment: An Earth resource Perspective, Prentice Hall.
- Jensen, J. R. (2005): Introductory Digital Image Processing, Prentice Hall, New Jersey.
- Joseph, G. (2004): Fundamentals of Remote Sensing, Universities Press, Hyderabad, India.
- Karlekar, S. (2006): Doorsamvedan - Remote Sensing (Marathi), Diamond Publications, Pune.
- Karlekar, S. (2017): Dursamvedan Aani Bhougolik Mahiti Pranali (Marathi), Diamond Publications, Pune.
- Lillesand, T. M., Kiefer, R. W. and Chipman, J. W. (2016): Remote Sensing and Image Interpretation, 6th Edition, Wiley India.
- Rao R. M. (2002): Geographical Information Systems, Rawat Publication.
- Sabins, F. F. (1996): Remote Sensing: Principles and Interpretation, W.H. Freeman and Company, San Francisco.

.Y.B.A. Geography Syllabus

Name of Subject: APPLIED COURSE OF Travel & Tourism

Subject Code: SEC – B Semester -IV

Total Credit:02,

Total Periods: 30

Objectives

1. To develop basic framework to understand the various elements of tourism management.
2. To evaluate the role of transport in travel and tourism industry.
3. To develop the skills to arrange, manage and implement various types of tours.

Skills to be developed:

1. Students will be able to perform online as well as offline booking and cancellation procedures for different available modes of travel and tourism.
2. Students will be able to acquire earning skills in tourism industry.

| Introduction to Tourism | | | |
|-------------------------|------------------------------------|--|---------|
| Unit No. | Topic | Learning Point | Periods |
| 1 | Introduction to Travel and Tourism | 1.1 Basic concepts: Travel, Tourism, Tourist, Transport 1.2 Types of Tourist and Tourism 1.3 Types of transportation 1.4 Supporting Infrastructure: Transportation, Accommodation, Communication facility, Security, Finance, Tourist Guide and Government Policy (Only short introduction) | 05 |
| 2 | Local Tourism | 2.1 Concept and need of local tourism 2.2 Introduction to local tourist places 2.3 Potential of local tourism and available infrastructure | 05 |
| 3 | Tour | 3.1 Basic skills: Communication, Time Management, Computer | 10 |

| | | | |
|----------|--|--|-----------|
| | planning and Skill development | operating, online booking, Net banking, Cancellation of booking and ticket, etc. 3.2 Framing the tour plan (Itinerary): Budget (Costing), Duration, Insurance, Route and other requirements for individual, family, group and mass level tours 3.3 Promotion of tourism 3.4 Plan for educational tour (long or short): Permission for tour, ticket booking, students concession and ticket cancellation, etc. | |
| 4 | Project work and Visit to tourist place | 4.1 Itinerary design of short or long tour (local, state level and national level: Cost, duration, requirements, booking processes for transportation (Railway, Air and Road) and Accommodations (Youth hostel, Resort, Dormitory, Hotels, Service Apartments, etc.) and Insurance. 4.2 International Tour Pre-planning: Need and types of passport and visa, documents required for passport and visa, other necessary documents required for International tours, International Date Line, Time difference, GMT and Indian Standard Time with help of internet sources. 4.3 One short tour (Not more than two days duration) and Preparation of tour report. | 10 |

Text Books:

1. Bhatia. Tourism Development (New Delhi, Sterling)
2. Seth: Tourism Management (New Delhi, Sterling)
3. Kaul: Dynamics of Tourism (New Delhi, Sterling)
4. Mill and Morrison – The Tourism system an Introductory Text (1992) Prentice Hall
5. Cooper, Fletcher, Tourism, Principles and practices (1993) Pitman
6. Burkart and Medlik Tourism, Past, Present and Future (1981) Heinemann, ELBS.
7. P.S. Gill, Dynamics of Tourism (4 Vols) Anmol Publication.
8. P.C. Sinha, Tourism Management. Anmol Publication.

References:

1. Travel Industry : Chunky Gee et-al
2. Tourism Systems - Mill and Morrison
3. Tourism Management Vol - 4 - P.C. Sinha
4. Tourism Development - R. Gartner
5. Studies in Tourism - Sagar Singh
6. Tourism: Principles and Practices - Cooper C., Fletcher J., Gilbert D and Wanhil.
7. Tourism: Principles and Practices - McIntosh , R.W.
8. Tourism : Past, Present and Future - Burkart & Medli