SAURASHTRA UNIVERSITY

STRUCTURE OF THE COURSES

OF

SUBJECT : GEOGRAPHY
B.A. ALL SEMESTER
(Revised Syllabus in Force from: June-2019)
<table>
<thead>
<tr>
<th>Sr No</th>
<th>Level</th>
<th>Sem</th>
<th>Course Group</th>
<th>Course (Paper) Title</th>
<th>Course (Paper) No</th>
<th>Credit</th>
<th>Internal Marks</th>
<th>External Marks</th>
<th>Practicals /Viva Marks</th>
<th>Total Marks</th>
<th>Course (Paper) Unique Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>UG 1</td>
<td></td>
<td>Core</td>
<td>Elements of Physical Geography</td>
<td>1</td>
<td>4</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Core</td>
<td>Physical Geography of Gujarat</td>
<td>2</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elec-1</td>
<td>Elements of Physical Geography</td>
<td>1</td>
<td>4</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elec-1</td>
<td>Physical Geography of Gujarat</td>
<td>2</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elec-2</td>
<td>Elements of Physical Geography</td>
<td>1</td>
<td>4</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elec-2</td>
<td>Physical Geography of Gujarat</td>
<td>2</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>UG 2</td>
<td></td>
<td>Core</td>
<td>Elements of Geomorphology</td>
<td>3</td>
<td>4</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Core</td>
<td>Socio-Economic Geography of Gujarat</td>
<td>4</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elec-1</td>
<td>Elements of Geomorphology</td>
<td>3</td>
<td>4</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elec-1</td>
<td>Socio-Economic Geography of Gujarat</td>
<td>4</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elec-2</td>
<td>Elements of Geomorphology</td>
<td>3</td>
<td>4</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elec-2</td>
<td>Socio-Economic Geography of Gujarat</td>
<td>4</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>UG 3</td>
<td></td>
<td>Core</td>
<td>Elements of Climatology</td>
<td>5</td>
<td>4</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Core</td>
<td>Physical Geography of India</td>
<td>6</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pract.</td>
<td>Elements of Cartography – 1</td>
<td>7</td>
<td>6</td>
<td>-</td>
<td>100</td>
<td>70+30</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elect-1</td>
<td>Elements of Climatology</td>
<td>5</td>
<td>4</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elect-1</td>
<td>Physical Geography of India</td>
<td>6</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elect-2</td>
<td>Elements of Climatology</td>
<td>5</td>
<td>4</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elect-2</td>
<td>Physical Geography of India</td>
<td>6</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>UG</td>
<td>4</td>
<td>Core</td>
<td>Elements of Oceanography</td>
<td>8</td>
<td>4</td>
<td>30</td>
<td>70</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-----</td>
<td>---</td>
<td>------</td>
<td>--------------------------</td>
<td>---</td>
<td>---</td>
<td>----</td>
<td>----</td>
<td>-----</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Core</td>
<td>Socio – Economic Geography of India</td>
<td>9</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pract.</td>
<td>Elements of Cartography – 2</td>
<td>10</td>
<td>6</td>
<td>-</td>
<td>100</td>
<td>70+30</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elect-1</td>
<td>Elements of Oceanography</td>
<td>8</td>
<td>4</td>
<td>30</td>
<td>70</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elect-2</td>
<td>Socio – Economic Geography of India</td>
<td>9</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elect-2</td>
<td>Elements of Oceanography</td>
<td>8</td>
<td>4</td>
<td>30</td>
<td>70</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elect-2</td>
<td>Socio – Economic Geography of India</td>
<td>9</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>UG</td>
<td>5</td>
<td>Core</td>
<td>Soil Geography</td>
<td>11</td>
<td>4</td>
<td>30</td>
<td>70</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Core</td>
<td>Environment Geography</td>
<td>12</td>
<td>4</td>
<td>30</td>
<td>70</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Core</td>
<td>Human Geography</td>
<td>13</td>
<td>4</td>
<td>30</td>
<td>70</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elect</td>
<td>Geography of Manufacturing</td>
<td>14</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elect</td>
<td>Fundamentals of Economic Geography - 1</td>
<td>15</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pract.</td>
<td>Elements of Cartography – III</td>
<td>16</td>
<td>6</td>
<td>-</td>
<td>100</td>
<td>70+30</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>UG</td>
<td>6</td>
<td>Core</td>
<td>Agriculture Geography</td>
<td>17</td>
<td>4</td>
<td>30</td>
<td>70</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Core</td>
<td>Geography of Resource</td>
<td>18</td>
<td>4</td>
<td>30</td>
<td>70</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Core</td>
<td>Geography of Settlement</td>
<td>19</td>
<td>4</td>
<td>30</td>
<td>70</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elect</td>
<td>Geography of Transportation &amp; Trade</td>
<td>20</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elect</td>
<td>Fundamentals of Economic Geography-2</td>
<td>21</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pract.</td>
<td>Elements of Cartography – III</td>
<td>22</td>
<td>6</td>
<td>-</td>
<td>100</td>
<td>70+30</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

**Note:**

1. Each paper and practical consist of 100 marks external and 30 marks internal. Semester – 3, 4, 5 and 6 consists of 2 Theory, 1 practical. There shall be a batch of 15 students for each Practical Course. There shall be Three Practical of six (6) hours duration, per week, per practical course.

2. Figures at the end of each topic of all the courses (Theory and Practical ) indicate tentative number of lecture to be delivered on respective topic of theory paper or exercise to be conducted in case of Practical.

3. Students can Carry Stencil Maps in the Examination.

4. Drawing maps and diagrams necessary in each papers.
Subject: Geography
Course (Paper) Name & No: Elements of Physical Geography – 1  Paper No -1
Course (Paper) Unique Code: 16010301010100
Course Exam Time Duration: 45 Lectures

<table>
<thead>
<tr>
<th>Name of Cour</th>
<th>Semester</th>
<th>Core/ Elective-1/ Elective-2/ Practical</th>
<th>Paper Code</th>
<th>Paper Title</th>
<th>Credit</th>
<th>Internal Marks</th>
<th>External Marks</th>
<th>Practical/ Viva/ Exam. Marks</th>
<th>External Exam. Time Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. A.</td>
<td>1</td>
<td>Core Elect-1/ Elect-2</td>
<td>16010301010100</td>
<td>Elements of Physical Geography</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td>-</td>
<td>2.15 hrs</td>
</tr>
</tbody>
</table>

Course Objectives:

➤ The objective of this course is to introduce the latest concepts in physical geography, essentially geomorphology; to the students of geography in a brief but adequate manner.

Course Contents:

Unit - I:

The nature and scope of physical geography, Inter - relation of physical geography with other branches of earth sciences, The place of geomorphology in physical geography.

Unit - II:

Solar system, Theories of origin of the Earth - Kant's gaseous hypothesis, Laplace nebular hypothesis, James jeans and Zeffreys tidal theory, Age of the Earth, Geological eras and periods, Earth's interior, Isostasy.

Unit - III:

Diastrophism – Endogenetic forces. Folding & Faulting, Earth quakes and volcanoes
Unit - IV:

Continental drift theories of Wegner's, Plate tectonics, Rocks - meaning, classification
and characteristics, Soils- Meaning and Profile

Suggested Readings:

1) भौतिक भूगोल : प्र. मंदर-मंदरार आद. शाल अने प्र. धनंजयार अन. असांभी, पुनरस्थापिता ग्रंथिमंडल आद.
3) Majid Husain: Geomorphology
4) Phillip Gersmehl, William kamrath, Hertrert grars – Physical geography.
5) Wooldridge S.W.: An outline of Geomorphology: Longmans
Course Objectives:

The course is aimed at presenting a comprehensive, integrated and empirically based profile of Gujarat. Besides the objective is to highlight the physical aspects such as relief, climate, vegetations and minerals of Gujarat with the regional personality of the state.

Course Contents:

Unit - I:

Location, Area and boundaries, Geological structure, Eras and Periods. Relief features, Major physiographic divisions.

Unit - II:

Climate: Characteristic of climate and affecting factors of climate. Climatic regions, types and its impotence. Drainage pattern: Major Rivers (Narmada, Tapi, Sabarmati and Bhadar)

Unit - III:

Natural vegetation: Types, distribution and importance, Wild life, National parks and conservation.

Unit - IV:
Mineral resources: Importance and distribution (Fluorspar, Limestone, Bauxite and China clay) Power resources: Importance and distribution (Lignite, Mineral oil, and Natural gas), Soil types and its Importance, distribution, problems and their conservation.

Suggested Readings:

1) દવે મંજુલાબેન ભી.: ગુજરાતની આર્થિક અને પ્રાદેશિક બેસ્ટિંગ (યુનિ. અંધ નિમ્નોએ બોર્ડ, અમદાવાદ)
2) સી. સી. કોકટે: ગુજરાતની વસ્તી (યુનિ. અંધ નિમ્ન બોર્ડ, અમદાવાદ)
3) નકશામાં ગુજરાત: (યુનિ. અંધ નિમ્નોએ બોર્ડ, અમદાવાદ)
4) Dikshit K.R. Geography of Gujarat (National Book Trust of India)
5) Spate O.H.K. India and Pakistan.
6) Kapadia – Animal Life in Gujarat.
7) Bhatt – Ports of Gujarat.

Subject: Geography
Course (Paper) Name & No : Elements of Geomorphology Paper No -3
Course (Paper) Unique Code :
Course Exam Time Duration : 45 Lectures
Course Objectives:

- The objectives of the course is to familiarize the students with the need for understanding of geomorphology with reference to certain fundamental concepts, focusing on the unity of geomorphology in the earth materials and the processes with or without an element of time. Process component of geomorphology is segmented into the internal and external processes of landscape evolution.

Course Contents:

Unit - I:

Denudation and Deposition: Weathering and its types, Exogentic forces, Geomorphic agent and processes: Erosion, transportation, Deposition. Mass wasting and Evolution of landscape – Concept of cycle of Erosion – Devis and Penck

Unit - II:

Works of fluvial (river), Glacial and associated landscape with its works.

Unit - III:

Works of Wind (Arid) Underground water (Karst) and Sea-waves (Coastal) and associated landscape with their works

Unit - IV:
Application of geomorphology to human activities: settlements, transport land use, mining, resource evolution, environmental hazards and assessment

**Suggested Readings:**

3) Thornbury: Principles of Geomorphology: John Wiley & Sons
6) Majid Husain – Geomorphology.
7) Pillip gersmehl, William kammrath, Herbert.
Course Exam Time Duration : 45 Lectures

<table>
<thead>
<tr>
<th>Name of Cour</th>
<th>Semester</th>
<th>Core/ Elective-1/ Elective-2/ Practical</th>
<th>Paper Code</th>
<th>Paper Title</th>
<th>Credit</th>
<th>Internal Marks</th>
<th>External Marks</th>
<th>Practical/ Viva/ Exam. Marks</th>
<th>External Exam. Time Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. A.</td>
<td>2</td>
<td>Core Elect-1/ Elect-2</td>
<td></td>
<td>Socio – Economic Geography of Gujarat</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td></td>
<td>2.15 hrs</td>
</tr>
</tbody>
</table>

Course Objectives:

- The course is aimed at presenting a comprehensive, integrated empirically based profile of Gujarat. Besides the objective the course contain - socio - economic aspects of Gujarat with the regional development of Gujarat

Course Contents:

Unit - I:


Unit - II:

Means of irrigation, Major multipurpose irrigation projects and its importance (Narmada, Ukai, kadana and Dharoi) , Industries : Location and Distribution of Major Industries – Cotton Textile, Sugar, Cement, Ceramic , Petro Chemical, Industrial Regions,

Unit - III:

Transportation: Means, types and importance, Sea – routs, ports ( Kandla, Veraval, Mundra and Alang), Trade- National and international

Unit - IV:
Population structure, Density and distribution, Urbanization and its problems.

Tourism: Geographical, religious, historical and cultural centre.

**Suggested Readings:**

1) દવે મંજુલાબેન ચી.: ગુજરાતની આર્થિક અને પ્રાદેશિક ભૂગોળ (પુસ્તક નિમંચ ઓફ જારી, અમદાવાદ)
2) સી. સી. રોક્ટર: ગુજરાતની વસ્તી (પુસ્તક નિમંચ ઓફ જારી, અમદાવાદ)
3) તાલીમાં ગુજરાત: (પુસ્તક નિમંચ ઓફ જારી, અમદાવાદ)
4) Dikshit K.R. Geography of Gujarat (National Book Trust of India)
5) Spate O.H.K. India and Pakistan.
6) Kapadia – Animal Life in Gujarat.
7) Bhatt – Ports of Gujarat.
<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Semester</th>
<th>Core/Elective-1/Elective-2/Practical</th>
<th>Paper Code</th>
<th>Paper Title</th>
<th>Credit</th>
<th>Internal Marks</th>
<th>External Marks</th>
<th>Practical/Viva/Exam. Marks</th>
<th>External Exam. Time Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. A.</td>
<td>3</td>
<td>Core Elect-1/Elect-2</td>
<td></td>
<td>Elements of Climatology</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td></td>
<td>2.15 hrs</td>
</tr>
</tbody>
</table>

**Course Objectives:**

- The objective of this course is to make the students. The aim of the course is to provide an understanding of weather phenomena; dynamics of global climates and generation of climatic information and their application.

**Course Contents:**

Unit - I:

Weather and climate: Elements and Factors affecting of weather and climate, Difference between weather and climate. Climatology: Definition and significance of climatology, Origin and Composition and Structure of the atmosphere

Unit - II:


Unit - III:

Atmospheric pressure: Factors affecting the pressure, Vertical and Horizontal distribution of pressure, Planetary and Local winds. Atmospheric disturbances: Tropical and Temperate cyclones.

Unit - IV:

Atmospheric moisture: Humidity, Evaporation and condensation, Types of precipitation.
The hydrological cycle. Atmospheric pollution and Global warming.

**Suggested Readings:**

1) પ્ર. મહેન્દ્રકુમાર આર. શાહ અને પ્ર. કાનજીભાઇ એન. જસાણી : ભૌતિક ભૂગોળ, પ્રતિભાટ ટાલખોરની પુસ્તકામાણ, બોર્દ.
6) India Met. Deptt. : Climatologically Tables of Observatories in India, Govt. of India, 1968.
<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Semester</th>
<th>Core/Elective-1/ Elective-2/ Practical</th>
<th>Paper Code</th>
<th>Paper Title</th>
<th>Credit</th>
<th>Internal Marks</th>
<th>External Marks</th>
<th>Practical/ Viva/ Exam. Marks</th>
<th>External Exam. Time Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. A.</td>
<td>3</td>
<td>Core Elect-1/ Elect-2</td>
<td>Physical Geography of India</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td></td>
<td>2.15 hrs</td>
<td></td>
</tr>
</tbody>
</table>

**Course Objectives:**

- To understand India in terms of various physical division, their important characteristics.
- To understand diversity of cultures in the country.
- To prepare the students for understanding the India as a dynamic entity emerging from the physical elements.

**Course Contents:**

Unit - I:

Location, structure and main physiographic divisions of India, land of diversities unity within diversities.

Unit - II:

Drainage system of India and their functional, significance regional and seasonal variation of climate and climatic regions of India.

Unit - III:

Natural vegetation: types and distributions, their use and need for conservation and animal Life.

Unit - IV:

Mineral resources, Minerals – Iron ore, Manganese, Bauxite, Copper, Zinc, Limestone, Mica, Salt.

Energy Resources – Coal, Petroleum, Hydel, Wind.
Soil types of India: their distribution and characteristics, soils problems and their remedies.

**Suggested Readings:**

1) प्र. जे. ज. घोष अने प्र. न. प. पांडेश : भारतीय भूगोल, युनिवर्सिटी प्रेस अम्बावाड़
5) डॉ. रामकुमार गुजर एन्ड वी. सी. जाट भारत का भूगोल – पंचशील प्रकाशन जयपुर.
7) Dube R. N. : Economic & Geography of India.
8) Mamona G. B. : Advance Geography of India.

Subject: Geography
Course (Paper) Name & No : Elements of Cartography – 1 (Practical ) Paper No - 7
Course (Paper) Unique Code :
Course Exam Time Duration : 45 Lectures
Course Objectives:

- The objectives of this course are to train the students in the art of representing demographic and social economic data base of any area through simple statistical techniques and cartograms.
- The concept of weather map weather instruments and symbol necessary for accurate Geographical weather forecasting and reading map.
- The course thus trains the student in preparing different types of maps.

Course Contents:

Unit - I:

The art and science of cartography – Techniques and preparation of maps, types of maps, principal of map design.

Unit - II:

Diagram representation of statistical data – (one dimensional diagram) simple line graph, simple bar diagram, combined line and bar graph, Climograph, Hythergraph, Wind rose.

Unit - III:

Weather Map – interpretation of Weather map, Symbols.

Weather instruments – introduction of following instruments – Thermograph (All types) Barometer, Anemometer, Rain gauge etc.

Weather instruments drawn in journal – Simple Thermometer, Minimum and Maximum Thermometer, Wet and Dry Thermometer, Rain Gauge.
Unit - IV:

Educational tour/ Village survey

**Suggested Readings:**

1) Dr. Narendra J. Desai: Aryan Geography, University of Gujarat Board, Ahmedabad.
2) Prof. Ambubhai Th. Desai and Prof. V. J. Dalal: Aryan Geography, Parts 1 and 2, University of Gujarat Board, Ahmedabad.
7) Singh, R.L. and Dutt, P.K. Elements of Practical Geography, Students Friends.

---

**Subject:** Geography

**Course (Paper) Name & No:** Elements of Oceanography  Paper No - 8

**Course (Paper) Unique Code:**

**Course Exam Time Duration:** 45 Lectures
Course Objectives:

- The objectives of the course are to introduce students to the many facets of Oceans, such as, evolution of the oceans, physical and chemical properties of sea water, atmospheric and oceanographic circulation, the fascinating world of marine life and the characteristic of marine environment and the impact of man on the marine environment.

Course Contents:

Unit - I:

Relevance of oceanography in Earth and atmospheric sciences: Definition, Nature and scope of oceanography surface, Configuration of the ocean floor - Continental shelf, Continental Slope, Deep Sea Plain or Abyssal Plain, Ocean deep or Trench Relief of Atlantic, Pacific and Indian Oceans.

Unit - II:

Composition of oceanic water, Distribution of temperature and salinity of Oceans and Seas.

Unit - III:

Circulation of Oceanic Waters: Waves and Tides, Currents: Currents of the Atlantic, Pacific and Indian Oceans.

Unit - IV:

Marine Deposits and Coral Reefs, Coastal Environment Oceans as Store House of Resources for the Future.

Suggested Readings:
<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name of Cour</strong></td>
<td><strong>Semester</strong></td>
<td><strong>Core/Elective-1/Elective-2/Practical</strong></td>
<td><strong>Paper Code</strong></td>
<td><strong>Paper Title</strong></td>
<td><strong>Credit</strong></td>
<td><strong>Internal Marks</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Subject: Geography
Course (Paper) Name & No: Socio – Economic Geography of India   Paper No -9
Course (Paper) Unique Code:
Course Exam Time Duration: 45 Lectures
Course Objectives:

- These objectives of this course are to give an overview of the land, people and economy of the India.
- The course aims to provide an understanding of the existing reality of resource utilization and environmental depletion.
- To sensitize the students with development issues and policies.

Course Contents:

Unit - I:

Animal wealth of India, Dairy Farming, White revolution and Marine Resources.
Agriculture : Characteristics of cropping pattern, Agricultures regions of India, their problems and remedies, Major crops (Wheat, Cotton, Rice, Tea, Sugarcane, Grand nut)
,Green revolution.

Unit - II:

Major Multipurpose projects and their regional significance.
Industries - Location and Distribution of Major Industries – Iron and Steel, Aluminium, Cotton Textile, Sugar, Petro Chemical and Allied, Cement.
Industrial Regions, Special Economic Zones

Unit - III:

Transportation: Road, Railways, Water routes, Air transportation, their distribution and development. Trade: National and international

Unit - IV:
Population structure, density and distribution of population in India and its problems.

Tourism Industry- Meaning and Types

Suggested Readings:

2) Dr. Ram Kumar Gujjar Ettie S. J. Bhaarat Ka Bhugol - Panchshil Prakashan Jaipur.
7) Dube R. N. : Economic & Geography of India.
8) Mamona G. B. : Advance Geography of India.
Course Objectives:

➢ Geography is an amalgam of physical as well a social sciences one as such, it is necessity for the students to go through laboratory exercises, particularly the techniques of drowning cartograms showing physical, climatic and socio economic attributes of reign.

➢ The objective of shoving relief is to understand the topographical map and conventional signs.

Course Contents:

Unit - I:

Representation of relief features – Hachure’s, hill shading, layer tinting contours spot height and bench marks. Representation of relief by contours. (Uniform slope, Concave slope, Convex slope, Conical hill, V shaped valley, U shaped valley, Water fall, Saddle, terraced slope)

Unit - II:

Diagramic representation of statistical data .

(I) Two dimensional statistical Diagrams – Rectangles, Squares, Circle, and Pie diagram.

(II) Three dimensional statistical Diagrams – Cube, Proportional, Spheres.

Unit - III:


Suggested Readings:
1) Dr. Narendr J. Desikan: Prayogik Bhugol, University of Baroda, Ahmedabad.
2) Pr. Ambarao Desai and Pr. V. J. Dalal: Prayogik Bhugol, Vols. 1 and 2, University of Baroda, Ahmedabad.
7) Singh, R. L. and Dutt, P. K. Elements of Practical Geography, Students Friends.

Subject: Geography
Course (Paper) Name & No: Soil Geography Paper No: 11
Course (Paper) Unique Code:
Course Exam Time Duration: 45 Lectures

<table>
<thead>
<tr>
<th>Name of Cour</th>
<th>Semester</th>
<th>Core/Elective-1/Elective-2/Practical</th>
<th>Paper Code</th>
<th>Paper Title</th>
<th>Credit</th>
<th>Internal Marks</th>
<th>External Marks</th>
<th>Practical/Viva/Exam. Marks</th>
<th>External Exam. Time Duration</th>
</tr>
</thead>
</table>

23 | Page
Course Objectives:

The aim of the course is to introduce the students to soil which is one of the important elements of the earth which supports the life system. The overuse and misuse of soil in recent years have resulted in degradation of soil. Study of soil will help the students to appreciate the inherent limitations of soil to a particular use and managing the soil effectiveness.

Course Contents:

Unit - I:

Nature, scope and significance of soil geography, soil geography as relationship with other sciences, Soil factors - Parent material, organic, climatic, topographic, spatial temporal dimensions

Unit - II:

Process of soil formation and soil development - physical, biotic and chemical Process, Composition of soils. Soil profile and development

Unit - III:

Physical properties of soil- Structure, and Texture, Chemicals properties of soil, Biologic process.

Unit - IV:

Classification of soils, their characteristics and world patterns, Soil erosion, Causes Degradation and Conservation of soil

Suggested Readings:
1) डॉ धमेंद्रसिंह - मुद्रा विज्ञान, हिमांशु पत्रिकाएँ, उदेपुर.
6) Ray Chodhari, S. P.: Soils of India ICAR New Delhi, 1968

Subject: Geography
Course (Paper) Name & No.: Environment Geography Paper No - 12
Course (Paper) Unique Code:
Course Exam Time Duration: 45 Lectures
Course Objectives:

The objective of this paper is to provide an overview of man and its interface with environment. The course aims to provide an understanding of the existing reality of resource utilization and environmental depletion; further aims to sensitize the students to the concept of sustainable resource use and sustainable development.

Course Contents:

Unit - I:

Environmental Geography – Definition, nature and scope, Environment geography and other sciences. Concept of the environment and definition, components and types of environment.

Unit - II:

Man Environmental Inter-Relation, Determinism, Possibilism, Symbiosis between man and environment. Ecosystems - Meaning and definition, principals of ecology, Types functioning and productivity of ecosystems, Conservation.

Unit - III:

Environmental Hazards - Types, introduction of disaster management. Environmental degradation - Types, degradation by human activities.

Unit - IV:

Environmental pollutions - Types of pollutions, Environmental awareness and education awareness, Environmental Policy, Remedial measures legislation.
Suggested Readings:

1) ડી. નીલેન્દ્રકુમાર જી. દીતિ: માનવ અને પયાાવરણ, અરુણોદય પ્રકાશન.
2) ડ૊ સંવન્દ્રિનાહ સિંહ: પયાાવરણ ભૂગોલ પ્રયોગ પ્રસ્તક ભારત, ઇલાહાબાદ.
3) Botkin D. B. and Keller Ea - Environmental Studies - Merrill publishing Company Columbus.
4) Dikshit R. D. - Geography and Teaching of the environment in Geography - Pune.
5) Bleton C - Natural Hazards and globla change - Tc Journal- 1989

Subject: Geography
Course (Paper) Name & No : Human Geography Paper No -13
Course (Paper) Unique Code :
Course Exam Time Duration : 45 Lectures
<table>
<thead>
<tr>
<th>Course Objectives:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The objectives of this course are to acquaint the students with the nature of man-environment relationship and human capability to adopt and modify the environment under its varied conditions from primitive life style to the modern living; to identify and understand environment and population in terms of their quality and spatial distribution pattern and to comprehend the contemporary issues facing the global community.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Contents:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit - I:</td>
</tr>
<tr>
<td>Human Geography: Meaning and scope, its relation with other branches of Geography.</td>
</tr>
<tr>
<td>Man and Environment: Man as a Geographical factor, Determinism and Possibilism.</td>
</tr>
<tr>
<td>Unit - II:</td>
</tr>
<tr>
<td>Distribution of Human Population: World distribution of population, physical, economic and social factors influence special distribution, Migrations internal and international population</td>
</tr>
<tr>
<td>Unit - III:</td>
</tr>
<tr>
<td>Ethnic Distribution: Meaning of Race, Physiological characteristics, brief study of racial classification and distribution of main types of races, Indian major types of tribes.</td>
</tr>
<tr>
<td>Unit - IV:</td>
</tr>
<tr>
<td>Development of Culture: Gradual emancipation of the man from the control of nature technology and civilization of tools and techniques.</td>
</tr>
</tbody>
</table>
Subject: Geography
Course (Paper) Name & No : Geography of Manufacturing   Paper No -14
Course (Paper) Unique Code :
Course Exam Time Duration : 45 Lectures

<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Semester</th>
<th>Core/ Elective-1/</th>
<th>Paper Code</th>
<th>Paper Title</th>
<th>Credit</th>
<th>Internal Marks</th>
<th>External Marks</th>
<th>Practical/ Viva/ Exam.</th>
<th>External Exam. Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective-2/Practical</td>
<td>Marks</td>
<td>Duration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>-------</td>
<td>----------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. A. 5 Elect</td>
<td>3 30 70</td>
<td>2.15 hrs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Course Objectives:**

- To introduce the nature, development and significance of manufacturing and its links with the world economy.
- To understand the location of major manufacturing activities with the support of various industrial location theories and models.
- To discuss problems and impact of manufacturing industries with respect to relocation, environmental pollution and occupational health and industrial hazard.

**Course Contents:**

**Unit - I:**

Nature, scope and recent developments, Elements and factors of localization of Manufacturing industries; Centralization and Decentralization of industrial enterprises;

**Unit - II:**

Theories and models of Industrial Location: Weber & Losch, linkages of modern industries, Modern refinements to least-cost-theory;

**Unit - III:**

Distribution and spatial pattern of manufacturing industries-Iron and Steel, Energy goods and Automobiles; Textiles, Chemicals, Petro-chemicals, Hardware and Software Industries. Methods of delineating manufacturing regions; major manufacturing regions of the world.

**Unit - IV:**
Environmental degradation caused by manufacturing industries. Industrial hazards and occupational health. Impact of manufacturing industries on economic development; changing industrial policy - need for integrated industrial development.

**Suggested Readings:**

| B. A. | 5 | Elect | Fundamentals of Economic Geography - 1 | 3 | 30 | 70 | 2.15 hrs |

**Course Objectives:**

- The basic economy of the world is undergoing rapid transformation in recent times.
- The process of such transformation of economic activities from primary to secondary and tertiary stages is dynamic in nature.

**Course Contents:**

Unit - I:

Meaning, Nature and scope of economic geography. Physical controls of economic activities (Location, Relief, Climate, Vegetation, Animals, Mineral resources and Soils)

Unit - II:

Classification of the economies of the World; Sectors of economy: primary, secondary, tertiary, quaternary, and quinary.

Unit - III:

The human factor affecting the Density and distribution of population, geographical controls of distribution of population in world, Man as a producer and consumer.

Unit - IV:

Agriculture: Types of agriculture, areas and characteristics. Physical and Human factors influencing crop production.
Spatial patterns of crop cultivation in the world-Distribution, Production and Trade of selected food and cash crops (Wheat, Rice, Cotton, Rubber.)
Suggested Readings:

1) Pr. R. C. Dalal – आर्थिक भूगोल की तस्वीरों के लिए पुस्तक, पुणे (1985).

2) Dr. D. S. J. Jatt – आर्थिक भूगोल, पंचशील प्रकाशन, जयपुर.


5) Thowman : The Geography of Economic Activates.

6) Zimmerman: world resources and Industries (Harper)


Subject: Geography

Course (Paper) Name & No : Elements of Cartography – III (Practical ) Paper No -16

Course (Paper) Unique Code :

Course Exam Time Duration : 45 Lectures
Elective - 2/ Practical

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Elective 2/ Practical</th>
<th>Elements of Cartography – III</th>
<th>Marks</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. A.</td>
<td>5</td>
<td>Core Pract</td>
<td>4</td>
<td>100</td>
</tr>
</tbody>
</table>

**Course Objectives:**

- The objectives of the course are to train the students in the art of preparing maps and the fundamental of map making techniques.
- The map projections necessary for accurate geographical positioning, and preparing physical plans of an area also form prefect the practical exercises.

**Course Contents:**

**Unit - I:**

Scale – Plain, diagonal and comparative scale, (different Units, time scale)

**Unit - II:**

Enlargement & Reduction of maps – Square method, similar triangle and Pentograph.

**Unit - III:**

General principles, Classification and choice of projections, construction properties, merit and demerits.

1. Zenithal Group – Gnomonic, Stereographic, Orthographic (Polar cases)
2. Conical Group - One Standard Parallel and two Standard Parallel

**Unit - IV:**

Village survey / Educational tour (Report should be prepared by each student separately).

**Suggested Readings:**
1) Dr. Narendra C. Dhillon: Prayogik Bhugol, Vyaktivasthi Grahvarthiyan Board, Ahmedabad.
7) Singh, R.L. and Dutt, P.K. Elements of Practical Geography, Students Friends.
Course Objectives:

➢ To familiarise the students with the concept, origin, and development of agriculture; to examine the role of agricultural determinants towards changing cropping patterns, intensity, productivity, diversification and specialization. The course further aims to familiarise the students with the application of various theories, models and classification schemes of cropping patterns and productivity.

Course Contents:

Unit - I:

Concept, meaning and scope of agricultural geography. Origen and development of agriculture.

Unit - II:

Factors affecting agriculture - Physical, Economic, Social, Political etc. Agriculture methods and system.

Unit - III:

Types of crops - Wheat, Rice, Maize, Sugarcane, Tea, Coffee, Cotton, Rubber. Agricultural regions of world and India.

Unit - IV:

Models - Von Thumen's Location, Agricultural problems and prospects developmental polices.

Suggested Readings:

1) कृषि भूगोल – प्रमिला कुमार एवम श्रीमल शर्मा, मध्यप्रदेश ग्रंथ अकादमी भोपाल.
2) कृषि भूगोल – डॉ. बी. एम. शर्मा, साहित्य भवन, आगरा.
3) कृषि भूगोल – लेजली सायमन, मध्यप्रदेश हिन्दी ग्रंथ अकादमी.
6) Hussain M. : Agriculture Geography Ravat Publication
Course Objectives:

- The objective of this paper is to provide an overview of resource geography and its interface with environment.
- The course aims to provide an understanding of the existing reality of resource utilization and environmental depletion; further aims to sensitize the students to the concept of sustainable resource use and sustainable development.

Course Contents:

Unit - I:

Meaning, nature and scope of geography of resources, Classification and types of resources.

Unit - II:


Unit - III:

Energy (Power) Resource: Coal, Petroleum, Hydro electric distribution and energy crises.
Human resource: Factors affecting to density and distribution of population.
Population and resource region.

Unit - IV:

Animal resources and Marine resource, utilization and conservation of resources,
Major resources- soil, forest, water, mineral ets. Resource policy of India.
Suggested Readings:

2) Zimmermans ; World resources and Industries (Harper)
3) N. S. Rathore : Non Conventional Energy Sources – (Himanshu Publication, Udaipur)
8) Simmons, I. G. Ecology of Natural Resources (Ed ward Arnold, London-1974)
9) Singh. S: Environmental Geography (Prayag Publication)
Elective-2/Practical

<table>
<thead>
<tr>
<th></th>
<th>Elective</th>
<th>Exam. Marks</th>
<th>Time Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. A.</td>
<td>Core</td>
<td>3</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>Geography of Settlement</td>
<td>30</td>
<td>2.15 hrs</td>
</tr>
</tbody>
</table>

Course Objectives:

- The aims of this course are to acquaint the students with the spatial and structural characteristics of human settlements under varied environmental conditions; to enable them to diagnose special issues related to urban and rural settlements;

Course Contents:

Unit - I:

Nature, Scope and development of settlement geography, Definition of urban and rural Settlement, Settlement: Merits and demerits. Settlement types and pattern

Unit - II:

Rural Settlement and Types- Morphology, Classification and Types of houses. Role of Gandhi in rural Development

Unit - III:

Urban Settlement and Types- Functions, Characteristics of urban settlement, Hierarchy of settlement

Unit - IV:

Settlement: Environment relationship, Global and regional pattern, Policies and programmes. Salient features of human settlements in India.
Suggested Readings:

1) माजिद हुसेन – मानव अधिवास, रायत पवित्रकेशन, जयपुर.
5) Singh R. L. : Readings in rural settlement Geography Banaras Hindu University, Department of Geography, Varanasi

Subject: Geography
Course (Paper) Name & No : Geography of Transportation and Trade   Paper No -20
**Course Objectives:**

➢ The objective of the course is to provide clarity about elements of transport as an infrastructure that facilitates linkages among locations and areas with varied demographic socio – culture and economic attributes and nature and agricultural resource. The subject importance is to understand the spatial variations in movement of commodities and trade relations within and between regions.

**Course Contents:**

Unit - I:

Transportation - Meaning and Importance of Transportation as Tertiary activity, Methods of study and characteristics of Geography of transportation.

Unit - II:

Factors affecting the developments of transportation, Role of technology in the developments of transportation.

Unit - III:


Unit - IV:

Suggested Readings:

1) वी. ज. दलाल – वाहनव्यवहार अने वेपारनी भूगोल, युनिवर्सिटी अंडरनिमाल बोर्ड. अमदावाड
4) Seaby K. R. The Geography of Air Transport : Hytchinson University
5) O’dell A. C. and Richards R. S. Railway and geography (Hutchinson University)
6) Taaffe E. J. and Gauthies H. L. geography of transportation (Prentice Hall – 1973)
Course Exam Time Duration : 45 Lectures

<table>
<thead>
<tr>
<th>Name of Cour</th>
<th>Semester</th>
<th>Core/ Elective-1/ Elective-2/ Practical</th>
<th>Paper Code</th>
<th>Paper Title</th>
<th>Credit</th>
<th>Internal Marks</th>
<th>External Marks</th>
<th>Practical/ Viva/ Exam. Marks</th>
<th>External Exam. Time Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. A.</td>
<td>6</td>
<td>Elect</td>
<td></td>
<td>Fundamentals of Economic Geography-2</td>
<td>3</td>
<td>30</td>
<td>70</td>
<td></td>
<td>2.15 hrs</td>
</tr>
</tbody>
</table>

Course Objectives:

- In view of this the objectives of this course are to integrate the various factors of economic development and to acquaint the students about this dynamic aspect of economic geography
- The course aims to provide an understanding of the existing reality of resource utilization.

Course Contents:

Unit - I:

Mining activities and distribution of important Mineral (Metallic & Non Metallic) resources. Iron, Bauxite, Manganese, Mica.

Unit - II:

Power (Energy) resources: Coal, Petroleum, Natural gas, Hydro Power, Atomic power and other Nautical power resources.

Unit - III:

Geography of Manufacturing: Meaning, Location aspects of industries, with reference to Iron and Steel industry, Cotton textile industry, Petro chemicals industry and Automobile industry.

Unit - IV:
Transportation and Trade: Means of Transportation as a tertiary activity and economic significance of transportation Land – Road – Railways and Water routes.

Types of trade, of International trade, Balance of trade.

**Suggested Readings:**

1) प. वी. ज. दलाल – आर्थिक भूगोल के तहत विश्वविद्यालय ग्रंथि ओगुण्डू। अमदावार
2) डॉ. बबी. सी. जाट – आर्थिक भूगोल, पंचशील, जयपुर.
5) Thowman: The Geography of Economic Activates.
6) Zimmerman: world resources and Industries (Harper)
7) Miller E. W.: A Geography of manufacturing (Prentice and Industries (Harper)
8) Janaki V.A. Economic geography concept publishing Co. New Delhi. 1985
<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Semester</th>
<th>Core/Elective-1/ Elective-2/Practical</th>
<th>Paper Code</th>
<th>Paper Title</th>
<th>Credit</th>
<th>Internal Marks</th>
<th>External Marks</th>
<th>Practical/ Viva/ Exam. Marks</th>
<th>External Exam. Time Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. A.</td>
<td>6</td>
<td>Core Pract.</td>
<td></td>
<td>Elements of Cartography - 4</td>
<td>6</td>
<td>-</td>
<td>100</td>
<td>70+30</td>
<td>5 hrs</td>
</tr>
</tbody>
</table>

**Course Objectives:**

- The objective of this course are to train the students for surveying, techniques and map projections and counter maps for Gradients, Slope analysis and surveying accurate plans of an area from parts of the practical exercises.

**Course Contents:**

Unit - I:

Map projections – Meaning and purpose, classification of projections, choice of map projections.

I. Zenithal Groups - Gnomonic, Stereographic and Orthographic (Equatorial Case)
II. Conical Groups - Bonne's and polyconic Projections.
IV. Cylindrical Group - Mercator

Unit - II:

Contour Map, Conversion of gradient into degrees of slope and vice versa.
Profile along the curved lines. Inter visibility, marking routs on contour map

Unit - III:

Surveying: Definition and purpose. Type of surveying, Methods of surveying.
I. Chain and tap Survey – Equipment and the surveying procedure.

II. Prismatic Compass – Prismatic compass, Measures of bearing, Method of prismatic compass surveying.

III. Plane Table Survey – Equipment procedure for Plane table survey.

**Suggested Readings:**

1) Dr. Narendra Jee: Aryanik Bhugol, University Press Board, Ahmedabad.
3) Balchin W.C.V. and Richards AW. (1952) Practical and Experimental Geography, Methuen, Landon
10) Singh, R.L. and Dutt, P.K. Elements of Practical Geography, Students Friends.