

Annexure-I of UG BoS Meeting

Choice Base Credit System  
B.A./B.Sc. Geography

| Year   | CORE COURSES (12)                             | Ability Enhancement Compulsory Course (AECC) (2)    | Skill Enhancement Course (SEC) (4)                                         | Discipline Specific Elective DSE (4)                                           | Generic Elective GE (2)                            |
|--------|-----------------------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------|
| First  | English/MIL-1                                 | (English/MIL Communication) / Environmental Science |                                                                            |                                                                                |                                                    |
|        | Physical Geography (GEOGP101CC)               |                                                     |                                                                            |                                                                                |                                                    |
|        | DSC- 2 A                                      |                                                     |                                                                            |                                                                                |                                                    |
|        | English/MIL-1                                 | Environmental Science/ (English/MIL Communication)  |                                                                            |                                                                                |                                                    |
|        | General Cartography (Practical) (GEOGP102 CC) |                                                     |                                                                            |                                                                                |                                                    |
|        | DSC- 2 B                                      |                                                     |                                                                            |                                                                                |                                                    |
| Second | English/MIL-2                                 |                                                     | Regional Planning and Development (GEOGP203SEC)                            |                                                                                |                                                    |
|        | Human Geography (GEOGP201CC)                  |                                                     |                                                                            |                                                                                |                                                    |
|        | DSC- 2 C                                      |                                                     |                                                                            |                                                                                |                                                    |
|        | English/MIL-2                                 |                                                     | Remote Sensing and GPS (GEOGP204SEC)                                       |                                                                                |                                                    |
|        | Environmental Geography (GEOGP202CC)          |                                                     |                                                                            |                                                                                |                                                    |
|        | DSC- 2 D                                      |                                                     |                                                                            |                                                                                |                                                    |
| Third  |                                               |                                                     | Geographic Information System (Practical) (GEOGP301SEC)                    | Geography of India (GEOGP303-1DSE)<br>or Economic Geography (GEOGP303-2DSE)    | GE-1 Disaster Risk Reduction (GEOGP305-GE1)        |
|        |                                               |                                                     |                                                                            | DSE-2 A                                                                        |                                                    |
|        |                                               |                                                     |                                                                            |                                                                                |                                                    |
|        |                                               |                                                     | Field Techniques and Survey based Project Report (Practical) (GEOGP302SEC) | Disaster Management (GEOGP304-1DSE)<br>or Geography of Tourism (GEOGP304-2DSE) | GE-2 Sustainability and Development (GEOGP306-GE2) |
|        |                                               |                                                     |                                                                            | DSE-2 B                                                                        |                                                    |
|        |                                               |                                                     |                                                                            |                                                                                |                                                    |

Note:

1. Practical paper will not have tutorials.

## CORE COURSES

### 1. PHYSICAL GEOGRAPHY (GEOGP101CC)

|                                 |                    |           |          |
|---------------------------------|--------------------|-----------|----------|
| <b>Course Code</b>              | <b>GEOGP 101CC</b> |           |          |
| <b>Credits-6</b>                | <b>L</b>           | <b>T</b>  | <b>P</b> |
|                                 | <b>65</b>          | <b>25</b> | <b>0</b> |
| <b>Course Type</b>              | <b>Core</b>        |           |          |
| <b>Lectures to be Delivered</b> | <b>90</b>          |           |          |

**Continuous Comprehensive Assessment (CCA) Pattern: Maximum Marks Allotted: 30**

| <b>Mid Term Test* (Marks)</b> | <b>Class Test/ Tutorials/Assignments (Marks)</b> | <b>Quiz/Seminars (Marks)</b> | <b>Attendance (Marks)</b> | <b>Total Marks</b> |
|-------------------------------|--------------------------------------------------|------------------------------|---------------------------|--------------------|
| 15                            | 5                                                | 5                            | 5                         | 30                 |
| <b>Total</b>                  | 5                                                | 5                            | 5                         |                    |

\* The pattern of examination for conducting the Mid Term Test will be same as prescribed for Annual examination.

#### **Annual Examination System:**

| <b>Maximum Marks Allotted</b> | <b>Minimum Pass Marks</b> | <b>Time Allotted</b> |
|-------------------------------|---------------------------|----------------------|
| <b>70</b>                     | <b>28</b>                 | <b>3.00 Hrs</b>      |

#### **Paper Setting Scheme (Theory Paper)**

| <b>Section</b> | <b>No of Questions</b> | <b>Syllabus Coverage</b> | <b>Nature of Questions and Answers</b> | <b>Questions to be Attempted</b> | <b>Maximum Marks</b> |
|----------------|------------------------|--------------------------|----------------------------------------|----------------------------------|----------------------|
| A              | 10                     | Complete                 | Objective Type                         | 10(1 mark each)                  | 10                   |
|                | 4                      | Complete                 | Short answer type (25-50 words)        | 4 (3 marks each)                 | 12                   |
| B              | 2                      | Unit I                   | Choice based Long answer type          | 1(12 marks each)                 | 12                   |
| C              | 2                      | Unit II                  | Choice based Long answer type          | 1(12 marks each)                 | 12                   |
| D              | 2                      | Unit III                 | Choice based Long answer type          | 1(12 marks each)                 | 12                   |
| E              | 2                      | Unit IV                  | Choice based Long answer type          | 1(12 marks each)                 | 12                   |
|                |                        |                          |                                        | <b>TOTAL</b>                     | <b>70</b>            |

| <b>Unit</b> | <b>Topic</b>                                                                                                                                                                                                      | <b>Allotted Time (Hours)</b> |           |          |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-----------|----------|
|             |                                                                                                                                                                                                                   | <b>L</b>                     | <b>T</b>  | <b>P</b> |
| <b>I.</b>   | <b>Introduction</b><br>Definition and Scope<br>Brief Introduction of Solar System, Origin of The Earth: Tidal Theory of Jeans and Jeffreys and Big Bang Theory<br>Rocks: Classification and Their Characteristics | 20                           | 7         | 0        |
| <b>II.</b>  | <b>Lithosphere</b><br>Internal Structure of Earth, Theory of Plate Tectonics, Weathering- Definition, factors and types<br>Fluvial Cycle of Erosion – Davis                                                       | 15                           | 6         | 0        |
| <b>III.</b> | <b>Atmosphere</b><br>Structure and composition of atmosphere, Heat Balance, Pressure and wind systems, Origin of Tropical Cyclones, Monsoon, Climatic Classification (Koppen).                                    | 15                           | 6         | 0        |
| <b>IV.</b>  | <b>Hydrosphere</b><br>Hydrological Cycle, Bottom Relief Features of Pacific Ocean, Tides and Currents.                                                                                                            | 15                           | 6         | 0        |
|             | <b>Total Hours</b>                                                                                                                                                                                                | <b>65</b>                    | <b>25</b> | <b>0</b> |

L-Lecture, T-Tutorial and P-Practical and Practices

**Text Book(s):**

1. Trewartha, G. T. 1968. *An Introduction to Climate*. McGraw-Hill Book Company, New York.
2. D.S. Lal. 1998. *Climatology*. Chaitanya Publishing House, Allahabad.
3. **Suggested Readings:**
4. Critchfield, J. Howard. 2012. *General Climatology*. 4<sup>th</sup> Edition (Reprinted). Phi Learning Pvt. Ltd., New Delhi.
5. Das, P. K. 2011. *The Monsoons*. National Book Trust, New Delhi
6. Conserva H. T., 2004: Illustrated Dictionary of Physical Geography, Author House, USA.
7. Gabler R. E., Petersen J. F. and Trapasso, L. M., 2007: Essentials of Physical
8. Geography (8th Edition), Thompson, Brooks/Cole, USA.
9. Garrett N., 2000: Advanced Geography, Oxford University Press.
10. Goudie, A., 1984: The Nature of the Environment: An Advanced Physical
11. Geography, Basil Blackwell Publishers, Oxford.
12. Hamblin, W. K., 1995: Earth's Dynamic System, Prentice Hall, N.J.
13. Husain M., 2002: Fundamentals of Physical Geography, Rawat Publications, Jaipur.
14. Monkhouse, F. J. 2009: Principles of Physical Geography, Platinum Publishers, Kolkata.
15. Strahler A. N. and Strahler A. H., 2008: Modern Physical Geography, John Wiley & Sons, New

## 2. GENERAL CARTOGRAPHY-PRACTICAL (GEOGP102CC)

|                          |            |   |    |
|--------------------------|------------|---|----|
| Course Code              | GEOGP102CC |   |    |
| Credits-6                | L          | T | P  |
|                          | 25         | 0 | 65 |
| Course Type              | Core       |   |    |
| Lectures to be Delivered | 90         |   |    |

Continuous Comprehensive Assessment (CCA) Pattern: Maximum Marks Allotted: 30

| Mid Term Test* (Marks) | Class Test/ Tutorials/Assignments (Marks) | Quiz/Seminars (Marks) | Attendance (Marks) | Total Marks |
|------------------------|-------------------------------------------|-----------------------|--------------------|-------------|
| 15                     | 5                                         | 5                     | 5                  | 30          |
| <b>Total</b>           | <b>15</b>                                 | <b>5</b>              | <b>5</b>           |             |

\* The pattern of examination for conducting the Mid Term Test will be same as prescribed for the Annual examination (Practical Paper).

**Marks Allocation Scheme Annual Practical (AP) Examination System:**

| Particulars       | Maximum Marks | Minimum Pass Marks | Time Allotted |
|-------------------|---------------|--------------------|---------------|
| Written Lab Work  | 10            | 8                  | 3.00 Hrs      |
| Practical Record* | 05            |                    |               |
| Viva-Voce         | 05            |                    |               |
| <b>Total</b>      | <b>20</b>     |                    |               |

**\*Note:** Use of non-programmable calculators and map stencils are allowed in the examination hall. The practical record may be evaluated on the parameters of Punctuality, Neatness, Entirety and indexing

**Paper Setting Scheme for (Theory Paper) Annual Examination System**

| Section      | No of Questions | Syllabus Coverage | Nature of Questions and Answers | Questions to be Attempted | Maximum Marks |
|--------------|-----------------|-------------------|---------------------------------|---------------------------|---------------|
| A            | 10              | Complete          | Objective Type                  | 10 (1 Marks each)         | 10            |
|              | 4               | Complete          | Short answer type (25-50 words) | 4 (3 Marks each)          | 12            |
| B            | 2               | Unit I            | Choice based Long answer type   | 1 (7 Marks each)          | 07            |
| C            | 2               | Unit II           | Choice based Long answer type   | 1 (7 Marks each)          | 07            |
| D            | 2               | Unit III          | Choice based Long answer type   | 1 (7 Marks each)          | 07            |
| E            | 2               | Unit IV           | Choice based Long answer type   | 1 (7 Marks each)          | 07            |
| <b>Total</b> |                 |                   |                                 |                           | <b>50</b>     |

### Course Content and Credit Scheme

| Unit       | Topic                                                                                                                                                | Allotted Time (Hrs) |   |         |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---|---------|
|            |                                                                                                                                                      | L                   | T | P       |
| <b>I.</b>  | <b>Introduction</b><br>Cartography as a Science of Communication<br>Basics of Map Reading<br>Map- Definition, Classification and Significance of Map | 6                   | 0 | 10(5)*  |
| <b>II.</b> | <b>Scale</b><br>Definition, Importance and Types of Scale<br>Three exercises in practical record each on Plain, Comparative and Diagonal Scale.      | 6                   | 0 | 30(15)* |

|                                                                                                                                                                                                                                                                            |           |          |                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------|------------------|
| <b>III. Map projections</b><br>Criteria for Choice of Projections; Attributes and Properties of:<br>Zenithal Gnomonic Polar Case, Zenithal Stereographic Polar<br>Case, Cylindrical Equal Area, Mercator's Projection and<br>Conical Projection with Two Standard Parallel | 7         | 0        | 40(20)*          |
| <b>IV. Representation Of Data</b><br>Line Graph, Bar Diagrams, Isopleth and Choropleth Maps, Dot<br>method, Climograph and Hythergraph                                                                                                                                     | 6         | 0        | 50(25)*          |
| <b>Total Hours</b>                                                                                                                                                                                                                                                         | <b>25</b> | <b>0</b> | <b>130 (65)*</b> |

L-Lecture, T-Tutorial and P-Practical and Practices

\* As per the weightage assigned to the P (Practical and Practices) category in the CBCS regulations 2 hours practical work has been treated equal to 1 credit hour.

1. Dent B. D., 1999: *Cartography: Thematic Map Design*, (Vol. 1), McGraw Hill.
  2. Gupta K. K and Tyagi V. C., 1992: *Working with Maps*, Survey of India, DST, New Delhi.
  3. Mishra R. P. and Ramesh A., 1989: *Fundamentals of Cartography*, Concept Publishing.
  4. Robinson A., 1953: *Elements of Cartography*, John Wiley.
  5. Sharma J. P., 2010: *Prayogic Bhugol*, Rastogi Publishers.
  6. Singh R. L. and Singh R. P. B., 1999: *Elements of Practical Geography*, Kalyani Publishers
  7. Singh R. L., 1998: *Prayogic Bhoogol Rooprekha*, Kalyani Publications.
- Steers J. A., 1965: *An Introduction to the Study of Map Projections*, University of London

### 3. HUMAN GEOGRAPHY (GEOGP201CC)

|                                 |                    |           |          |
|---------------------------------|--------------------|-----------|----------|
| <b>Course Code</b>              | <b>GEOG P201CC</b> |           |          |
| <b>Credits-6</b>                | <b>L</b>           | <b>T</b>  | <b>P</b> |
|                                 | <b>65</b>          | <b>25</b> | <b>0</b> |
| <b>Course Type</b>              | <b>Core</b>        |           |          |
| <b>Lectures to be Delivered</b> | <b>90</b>          |           |          |

**Note:** CCA and Annual Examination scheme is same as in Paper GEOGP201CC

#### Course Content and Credit Scheme

| Unit       | Topic                                                                                                                                                                                             | Allotted Time (Hours) |           |          |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------|----------|
|            |                                                                                                                                                                                                   | L                     | T         | P        |
| <b>I</b>   | <b>Introduction</b><br>Definition, Nature, Major Subfields, Contemporary Relevance of Human Geography                                                                                             | 15                    | 6         | 0        |
| <b>II</b>  | <b>Population</b><br>World Population Distribution, density and growth, Demographic Transition Theory.                                                                                            | 15                    | 6         | 0        |
| <b>III</b> | <b>Space and Society</b><br>Human Races: Classification(Griffith Taylor) and world distribution<br>Major Religions of the world and distribution<br>Major languages of the world and distribution | 20                    | 7         | 0        |
| <b>IV</b>  | <b>Settlements</b><br>Types and Patterns of Rural Settlements<br>Classification of Urban settlements<br>Trends and Patterns of World Urbanization                                                 | 15                    | 6         | 0        |
|            | <b>Total Hours</b>                                                                                                                                                                                | <b>65</b>             | <b>25</b> | <b>0</b> |

L-Lecture, T-Tutorial and P-Practical and Practices

#### Text Book(s):

1. Husain, Majid. 2010. *Human Geography*. Repinted. Rawat Publications, Jaipur.

#### Suggested Readings:

2. Singh, R.L. 2012. *Fundamentals of Human Geography*. Sharda Publications, Varanasi, UP.
3. Pitzl, Gerald. R. 2007. *Encyclopedia of Human Geography*. Greenwood Publishing Group & Rawat Publications, Jaipur
4. Daniel, P.A. and Hopkinson, M.F. (1989) *The Geography of Settlement*, Oliver & Boyd, London.
5. Johnston R; Gregory D, Pratt G. et al. (2008) *The Dictionary of Human Geography*, Blackwell Publication.
6. Jordan-Bychkov et al. (2006) *The Human Mosaic: A Thematic Introduction to Cultural Geography*. W. H. Freeman and Company, New York.
7. Kaushik, S.D. (2010) *Manav Bhugol*, Rastogi Publication, Meerut.
8. Maurya, S.D. (2012) *Manav Bhugol*, Sharda Pustak Bhawan. Allahabad.
9. Ghosh, S. (2015) *Introduction to settlement geography*. Orient Black Swan Private Ltd., Kolkata

#### 4. ENVIRONMENTAL GEOGRAPHY (GEOGP 202CC)

|                                 |                    |           |          |
|---------------------------------|--------------------|-----------|----------|
| <b>Course Code</b>              | <b>GEOGP 202CC</b> |           |          |
| <b>Credits-6</b>                | <b>L</b>           | <b>T</b>  | <b>P</b> |
|                                 | <b>65</b>          | <b>25</b> | <b>0</b> |
| <b>Course Type</b>              | <b>Core</b>        |           |          |
| <b>Lectures to be Delivered</b> | <b>90</b>          |           |          |

**Note:** CCA and Annual Examination scheme is same as in Paper GEOGP101CC

##### Course Content and Credit Scheme

L-Lecture, T-Tutorial and P-Practical and Practices

| Unit        | Topic                                                                                                                                     | Allotted Time (Hours) |           |          |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------|----------|
|             |                                                                                                                                           | L                     | T         | P        |
| <b>I.</b>   | Definition and Scope of Environmental Geography<br>Meaning and Components of Environment<br>Ecosystem – Concept, components and Functions | 17                    | 7         | 0        |
| <b>II.</b>  | Human-Environment Relationship<br>Environmental Determinism and Possibilism<br>Biomes- Definition, Mountain and Desert Regions            | 16                    | 6         | 0        |
| <b>III.</b> | Environmental Problems: Air and water Pollution, Their Causes, Impacts and Management, Biodiversity Loss                                  | 16                    | 6         | 0        |
| <b>IV.</b>  | Environmental Management Initiatives in India<br>Environmental Protection Act, 1982, Environmental Policy of India(2006), Chipko Movement | 16                    | 6         | 0        |
|             | <b>Total Hours</b>                                                                                                                        | <b>65</b>             | <b>25</b> | <b>0</b> |

##### Reading List

1. Casper J.K. (2010) Changing Ecosystems: Effects of Global Warming. Infobase Pub. New York.
2. Hudson, T. (2011) Living with Earth: An Introduction to Environmental Geology, PHI Learning Private Limited, New Delhi.
3. Miller, G.T. (2007) Living in the Environment: Principles, Connections, and Solutions, Brooks/ Cole Cengage Learning, Belmont.
4. Singh, R.B. (1993) Environmental Geography, Heritage Publishers, New Delhi.
5. UNEP (2007) Global Environment Outlook: GEO4: Environment For Development, United Nations Environment Programme. University Press, Cambridge.
6. Wright R. T. and Boorse, D. F. (2010) Toward a Sustainable Future, PHI Learning Pvt Ltd, New Delhi.
7. Singh, R.B. and Hietala, R. (Eds.) (2014) Livelihood security in Northwestern Himalaya: Case studies from changing socio-economic environments in Himachal Pradesh, India. Advances in Geographical and Environmental Studies, Springer
8. Singh, Savindra 2001. *Paryavaran Bhugol*, Prayag Pustak Bhawan, Allahabad. (in Hindi)

## Skill Enhancement Course (4 Compulsory Papers)

### 1. REGIONAL PLANNING AND DEVELOPMENT (GEOGP 203SEC)

|                                 |                          |           |          |
|---------------------------------|--------------------------|-----------|----------|
| <b>Course Code</b>              | <b>(GEOGP 203SEC)</b>    |           |          |
| <b>Credits-4</b>                | <b>L</b>                 | <b>T</b>  | <b>P</b> |
|                                 | <b>45</b>                | <b>15</b> | <b>0</b> |
| <b>Course Type</b>              | <b>Skill Enhancement</b> |           |          |
| <b>Lectures to be Delivered</b> | <b>60</b>                |           |          |

**Note:** CCA and Annual examination scheme is same as in Paper GEOGP 101CC)

#### Course Content and Credit Scheme

| Unit        | Topic                                                                                                                                  | Allotted Time (Hours) |           |          |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------|----------|
|             |                                                                                                                                        | L                     | T         | P        |
| <b>I.</b>   | INTRODUCTION<br>Concept, Need and Types of regional Planning<br>Characteristics and Delineation of Planning Region                     | 11                    | 4         | 0        |
| <b>II.</b>  | Regionalization: Concept, Hill Region: Case study of Himachal Pradesh(Physical and Cultural aspects)                                   | 11                    | 4         | 0        |
| <b>III.</b> | MODELS FOR REGIONAL PLANNING:<br>Growth Pole Theory and<br>Core Periphery Model                                                        | 11                    | 4         | 0        |
| <b>IV.</b>  | Regional Development Initiatives:<br>Case Studies<br>Integrated tribal development programme (ITDP)<br>Damodar Valley Corporation(DVC) | 11                    | 4         | 0        |
|             | <b>Total Hours</b>                                                                                                                     | <b>44</b>             | <b>16</b> | <b>0</b> |

L-Lecture, T-Tutorial and P-Practical and Practices

#### Reading List

1. Blij H. J. De, 1971: *Geography: Regions and Concepts*, John Wiley and Sons.
2. Claval P.I, 1998: *An Introduction to Regional Geography*, Blackwell Publishers, Oxford and Massachusetts.
3. Friedmann J. and Alonso W. (1975): *Regional Policy - Readings in Theory and Applications*, MIT Press, Massachusetts.
4. Gore C. G., 1984: *Regions in Question: Space, Development Theory and Regional Policy*, Methuen, London.
5. Gore C. G., Köhler G., Reich U-P. and Ziesemer T., 1996: *Questioning Development; Essays on the Theory, Policies and Practice of Development Intervention*, Metropolis- Verlag, Marburg.
6. Haynes J., 2008: *Development Studies*, Polity Short Introduction Series.
7. Johnson E. A. J., 1970: *The Organization of Space in Developing Countries*, MIT Press, Massachusetts.
8. Peet R., 1999: *Theories of Development*, The Guilford Press, New York.
9. UNDP 2001-04: *Human Development Report*, Oxford University Press.
10. World Bank 2001-05: *World Development Report*, Oxford University Press, New

### REMOTE SENSING AND GPS (GEOGP 204SEC)

|                                 |                          |          |                |
|---------------------------------|--------------------------|----------|----------------|
| <b>Course Code</b>              | <b>(GEOGP 204SEC)</b>    |          |                |
| <b>Credits-4</b>                | <b>L</b>                 | <b>T</b> | <b>P</b>       |
|                                 | <b>15</b>                | <b>0</b> | <b>90(45)*</b> |
| <b>Course Type</b>              | <b>Skill Enhancement</b> |          |                |
| <b>Lectures to be Delivered</b> | <b>60</b>                |          |                |

**Continuous Comprehensive Assessment (CCA) Pattern: Maximum Marks Allotted: 30**

| <b>Mid Term Test* (Marks)</b> | <b>Class Test/ Tutorials/Assignments (Marks)</b> | <b>Quiz/Seminars (Marks)</b> | <b>Attendance (Marks)</b> | <b>Total Marks</b> |
|-------------------------------|--------------------------------------------------|------------------------------|---------------------------|--------------------|
| 15                            | 5                                                | 5                            | 5                         | 30                 |
| <b>Total</b>                  | <b>15</b>                                        | <b>5</b>                     | <b>5</b>                  |                    |

\* The pattern of examination for conducting the Mid Term Test will be same as prescribed for the Annual examination.

#### **Marks Allocation Scheme Annual Practical Examination System:**

| <b>Particulars</b> | <b>Maximum Marks</b> | <b>Minimum Pass Marks</b> | <b>Time Allotted</b> |
|--------------------|----------------------|---------------------------|----------------------|
| Written Lab Work   | 10                   | 8                         | 3.00 Hrs             |
| Practical Record*  | 05                   |                           |                      |
| Viva-Voce          | 05                   |                           |                      |
| <b>Total</b>       | <b>20</b>            |                           |                      |

**\*Note:** Use of non-programmable calculators and map stencils are allowed in the examination hall. The practical record may be evaluated on the parameters of Punctuality, Neatness, Entirety and indexing

#### **Paper Setting Scheme for (Theory Paper) Annual Examination**

| <b>Section</b> | <b>No of Questions</b> | <b>Syllabus Coverage</b> | <b>Nature of Questions and Answers</b> | <b>Questions to be Attempted</b> | <b>Maximum Marks</b> |
|----------------|------------------------|--------------------------|----------------------------------------|----------------------------------|----------------------|
| A              | 10                     | Complete                 | Objective Type                         | 10 (1 Marks each)                | 10                   |
|                | 4                      | Complete                 | Short answer type (25-50 words)        | 4 (3 Marks each)                 | 12                   |
| B              | 2                      | Unit I                   | Choice based Long answer type          | 1 (7 Marks each)                 | 07                   |
| C              | 2                      | Unit II                  | Choice based Long answer type          | 1(7 Marks each)                  | 07                   |
| D              | 2                      | Unit III                 | Choice based Long answer type          | 1(7 Marks each)                  | 07                   |
| E              | 2                      | Unit IV                  | Choice based Long answer type          | 1(7 Marks each)                  | 07                   |
| <b>Total</b>   |                        |                          |                                        |                                  | <b>50</b>            |

### Course Content and Credit Scheme

| <b>Unit</b> | <b>Topic</b>                                                                                                                                         | <b>Allotted Time (Hours)</b> |          |                |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------|----------------|
|             |                                                                                                                                                      | <b>L</b>                     | <b>T</b> | <b>P</b>       |
| <b>I.</b>   | Remote Sensing: Definition, Development, Platforms and Types                                                                                         | 3                            | 0        | 10(5)*         |
| <b>II.</b>  | Aerial Photography: Definitions, Principles, Types and Geometry                                                                                      | 4                            | 0        | 20(10)*        |
| <b>III.</b> | Satellite Remote Sensing: Principles, EMR Interaction with Atmosphere and Earth Surface; Satellites (Landsat and IRS) and Sensors.                   | 4                            | 0        | 30(15)*        |
| <b>IV.</b>  | Bases of Visual Interpretation of Remote Sensing images: Land use/ Land Cover, Fundamentals of Global Positioning System (GPS) – Principles and Uses | 4                            | 0        | 30(20)*        |
|             | <b>Total Hours</b>                                                                                                                                   | <b>15</b>                    | <b>0</b> | <b>90(45)*</b> |

L-Lecture, T-Tutorial and P-Practical

**Practical Record:** A project file consisting of any five exercises will be done from aerial photos/ satellite images (scale, orientation and interpretation) and GPS field survey.

### Reading List

1. Campbell J. B., 2007: *Introduction to Remote Sensing*, Guildford Press.
2. Jensen J. R., 2004: *Introductory Digital Image Processing: A Remote Sensing Perspective*, Prentice Hall.
3. Joseph, G. 2005: *Fundamentals of Remote Sensing*, United Press India.
4. Lillesand T. M., Kiefer R. W. and Chipman J. W., 2004: *Remote Sensing and Image Interpretation*, Wiley. (Wiley Student Edition).
5. Nag P. and Kudra, M., 1998: *Digital Remote Sensing*, Concept, New Delhi.
6. Rees W. G., 2001: *Physical Principles of Remote Sensing*, Cambridge University Press.
7. Singh R. B. and Murai S., 1998: *Space-informatics for Sustainable Development*, Oxford and IBH Pub.
8. Wolf P. R. and Dewitt B. A., 2000: *Elements of Photogrammetry: With Applications in GIS*, McGraw-Hill.

## GEOGRAPHIC INFORMATION SYSTEM (GEOGP 301SEC)

|                                 |                          |          |          |
|---------------------------------|--------------------------|----------|----------|
| <b>Course Code</b>              | <b>(GEOGP 301SEC)</b>    |          |          |
| <b>Credits-4</b>                | <b>L</b>                 | <b>T</b> | <b>P</b> |
|                                 | 15                       | 0        | 90(45)*  |
| <b>Course Type</b>              | <b>Skill Enhancement</b> |          |          |
| <b>Lectures to be Delivered</b> | <b>60</b>                |          |          |

**Note:** The CCA and Annual Examination (Theory Paper) & Annual Practical Examination is same as in paper GEOGP204SEC

### Course Content and Credit Scheme

| Unit        | Topic                                                                                                                                  | Allotted Time (Hours) |          |                |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------|----------------|
|             |                                                                                                                                        | L                     | T        | P              |
| <b>I.</b>   | <b>Introduction</b><br>Meaning and Scope of GIS, Components of GIS, History of Geographic Information System(GIS)                      | 3                     | 0        | 10(5)*         |
| <b>II.</b>  | <b>Data Types</b><br>GIS Data Structures: Types (spatial and Non-spatial), Raster and Vector Data Structure.                           | 4                     | 0        | 20(10)*        |
| <b>III.</b> | <b>Spatial referencing system</b><br>Concept of Georeferencing, Editing and attribute data integration                                 | 4                     | 0        | 30(15)*        |
| <b>IV.</b>  | <b>GIS based Exercises on</b><br>Georeferencing, Subsetting, Extraction of Land Use/Land Cover layers of any area and thematic mapping | 4                     | 0        | 30(20)*        |
|             | <b>Total Hours</b>                                                                                                                     | <b>15</b>             | <b>0</b> | <b>90(45)*</b> |

**Practical Record:** The course teacher can use Survey of India toposheets/satellite images/Google images of any area of his/her choice for practical exercises. A project file consisting of any 5 exercises using any GIS Software on above mentioned themes.

### Reading List

1. Bhatta, B. (2010) Analysis of Urban Growth and Sprawl from Remote Sensing, Springer, Berlin Heidelberg.41
2. Burrough, P.A., and McDonnell, R.A. (2000) Principles of Geographical Information System-Spatial Information System and Geo-statistics. Oxford University Press
3. Chauniyal, D.D. (2010) Sudur Samvedan evam Bhogolik Suchana Pranali, Sharda Pustak Bhawan, Allahabad
4. Heywoods, I., Cornelius, S and Carver, S. (2006) An Introduction to Geographical Information system. Prentice Hall.
5. Jha, M.M. and Singh, R.B. (2008) Land Use: Reflection on Spatial Informatics Agriculture and Development, New Delhi: Concept.
6. Nag, P. (2008) Introduction to GIS, Concept India, New Delhi.
7. Sarkar, A. (2015) Practical geography: A systematic approach. Orient Black Swan Private Ltd., New Delhi
8. Singh, R.B. and Murai, S. (1998) Space Informatics for Sustainable Development, Oxford and IBH, New Delhi.

#### 4. FIELD TECHNIQUES & SURVEY BASED PROJECT REPORT (GEOGP 302SEC)

|                                 |                          |          |                |
|---------------------------------|--------------------------|----------|----------------|
| <b>Course Code</b>              | <b>(GEOGP 302SEC)</b>    |          |                |
| <b>Credits-4</b>                | <b>L</b>                 | <b>T</b> | <b>P</b>       |
|                                 | <b>15</b>                | <b>0</b> | <b>90(45)*</b> |
| <b>Course Type</b>              | <b>Skill Enhancement</b> |          |                |
| <b>Lectures to be Delivered</b> | <b>60</b>                |          |                |

**Note:** The CCA, Annual Theory Paper and Annual Practical Examination is same as in paper GEOG204 SEC

#### Course Content and Credit Scheme

| Unit        | Topic                                                                                                                                                                                                   | Allotted Time (Hrs) |          |                |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------|----------------|
|             |                                                                                                                                                                                                         | L                   | T        | P/FW           |
| <b>I.</b>   | <b>Introduction</b><br>Field Work in Geographical Studies – Role, Value and Ethics of Field-Work, Defining the Field and Identifying the Case Study – Rural / Urban / Physical / Human / Environmental. | 3                   | 0        | 10(5)*         |
| <b>II.</b>  | <b>Field Techniques</b><br>Merits, Demerits and Selection of the Appropriate Technique; Observation (Participant / Non Participant).                                                                    | 4                   | 0        | 20(10)*        |
| <b>III.</b> | <b>Questionnaires</b><br>(Open/ Closed / Structured / Non-Structured); Interview with Special Focus on Focused Group Discussions; Space Survey (Transects and Quadrants, Constructing a Sketch).        | 4                   | 0        | 30(15)*        |
| <b>IV.</b>  | <b>Designing the Field Report</b><br>Aims and Objectives, Methodology, Analysis, Interpretation and Writing the Report.                                                                                 | 4                   | 0        | 30(20)*        |
|             | <b>Total Hours</b>                                                                                                                                                                                      | <b>15</b>           | <b>0</b> | <b>90(45)*</b> |

FW-Field Work

#### Practical Record

1. Each student will prepare an individual report based on primary and secondary data collected during field work.
2. The duration of the field work should not exceed 10 days.
3. The word count of the report should be about **8000 to 12,000** excluding figures, tables, photographs, maps, references and appendices.
4. One copy of the report on A 4 size paper should be submitted in soft binding.

#### Reading List

1. Creswell J., 1994: *Research Design: Qualitative and Quantitative Approaches* Sage Publications.
2. Dikshit, R. D. 2003. *The Art and Science of Geography: Integrated Readings*. Prentice-Hall of India, New Delhi.
3. Evans M., 1988: "Participant Observation: The Researcher as Research Tool" in *Qualitative Methods in Human Geography*, eds. J. Eyles and D. Smith, Polity.
4. Mukherjee, Neela 1993. *Participatory Rural Appraisal: Methodology and Application*. Concept Pubs. Co., New Delhi.
5. Mukherjee, Neela 2002. *Participatory Learning and Action: with 100 Field Methods*. Concept Pubs. Co., New Delhi
6. Robinson A., 1998: "Thinking Straight and Writing That Way", in *Writing Empirical Research Reports: A Basic Guide for Students of the Social and Behavioural Sciences*, eds. by F. Pryczak and R. Bruce Pryczak, Publishing: Los Angeles.
7. Special Issue on "Doing Fieldwork" *The Geographical Review* 91:1-2 (2001).
8. Stoddard R. H., 1982: *Field Techniques and Research Methods in Geography*, Kendall/Hunt.
9. Wolcott, H. 1995. *The Art of Fieldwork*. Alta Mira Press, Walnut Creek, CA.

## Discipline Specific Elective Papers (2 Compulsory Papers)

### 1. GEOGRAPHY OF INDIA (GEOGP 303-1DSE)

|                                 |                                     |           |          |
|---------------------------------|-------------------------------------|-----------|----------|
| <b>Course Code</b>              | <b>(GEOGP 303-1DSE)</b>             |           |          |
| <b>Credits-6</b>                | <b>L</b>                            | <b>T</b>  | <b>P</b> |
|                                 | <b>65</b>                           | <b>25</b> | <b>0</b> |
| <b>Course Type</b>              | <b>Discipline Specific Elective</b> |           |          |
| <b>Lectures to be Delivered</b> | <b>90</b>                           |           |          |

**Note:** CCA and Annual Examination ESE scheme is same as in Paper GEOGP 101 CC

#### Course Content and Credit Scheme

| Unit       | Topic                                                                                                                                                                      | Allotted Time<br>(Hours) |           |          |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------|----------|
|            |                                                                                                                                                                            | L                        | T         | P        |
| <b>I</b>   | <b>Physical Setting</b><br>Location, Major physiographic region of India<br>Climate – Factors, Characteristics, Soils of India                                             | 16                       | 6         | 0        |
| <b>II</b>  | <b>Population</b><br>Size and Growth since 1901, Population Distribution and Density,<br>Literacy, Sex Ratio                                                               | 16                       | 6         | 0        |
| <b>III</b> | <b>Settlement System</b><br>Rural Settlement Types and Patterns, Urban Settlement Types and Pattern.                                                                       | 16                       | 6         | 0        |
| <b>IV</b>  | <b>Resource Base</b><br>Power (Coal and hydroelectricity), Minerals (iron ore and bauxite). Economy – Agriculture (Rice, Wheat)<br>Industries (Cotton Textile, Iron-Steel) | 16                       | 8         | 0        |
|            | <b>Total Hours</b>                                                                                                                                                         | <b>64</b>                | <b>26</b> | <b>0</b> |

L-Lecture, T-Tutorial and P-Practical and Practices

#### Reading List

1. Hussain M., 1992: *Geography of India*, Tata McGraw Hill Education.
2. Mamoria C. B., 1980: *Economic and Commercial Geography of India*, Shiva Lal Agarwala.
3. Miller F. P., Vandome A. F. and McBrewster J., 2009: *Geography of India: Indo- Gangetic Plain, Thar Desert, Major Rivers of India, Climate of India, Geology of India*, Alphascript Publishing.
4. Nag P. and Sengupta S., 1992: *Geography of India*, Concept Publishing.
5. Pichamuthu C. S., 1967: *Physical Geography of India*, National Book Trust.
6. Sharma T. C. and Coutinho O., 1997: *Economic and Commercial Geography of India*, Vikas Publishing.
7. Singh Gopal, 1976: *A Geography of India*, Atma Ram.
8. Spate O. H. K. and Learmonth A. T. A., 1967: *India and Pakistan: A General and Regional Geography*, Methuen.
8. Rana, Tejbir Singh, 2015, *Diversity of India*, R.K. Books, Delhi.

## 2. ECONOMIC GEOGRAPHY (GEOGP 303-2DSE)

|                                 |                                     |           |          |
|---------------------------------|-------------------------------------|-----------|----------|
| <b>Course Code</b>              | <b>(GEOGP 303-2DSE)</b>             |           |          |
| <b>Credits-6</b>                | <b>L</b>                            | <b>T</b>  | <b>P</b> |
|                                 | <b>65</b>                           | <b>25</b> | <b>0</b> |
| <b>Course Type</b>              | <b>Discipline Specific Elective</b> |           |          |
| <b>Lectures to be Delivered</b> | <b>90</b>                           |           |          |

**Note:** CCA and Annual Examination scheme is same as in Paper GEOGP 101CC

### Course Content and Credit Scheme

| Unit        | Topic                                                                                                                                                                   | Allotted Time<br>(Hours) |           |          |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------|----------|
|             |                                                                                                                                                                         | L                        | T         | P        |
| <b>I.</b>   | <b>Introduction</b><br>Definition, Approaches and Fundamental Concepts of Economic Geography.<br>Locational Theories – Agriculture (Von Thunen) and Industrial (Weber). | 16                       | 6         | 0        |
| <b>II.</b>  | <b>Primary Activities</b><br>Intensive Subsistence Farming, Commercial Grain Farming, Plantation, Commercial Dairy Farming, and Mining (Coal and petroleum).            | 16                       | 6         | 0        |
| <b>III.</b> | <b>Secondary Activities</b><br>Major Industries : Iron and Steel, Cotton Textile<br>Major Industrial Regions: Eastern North American Region, Western European Region    | 16                       | 6         | 0        |
| <b>IV.</b>  | <b>Tertiary and Quaternary Activities</b><br>Major Oceanic Routes: Atlantic, Pacific and Indian Ocean<br>International Trade: Concept, Volume and Direction             | 16                       | 8         | 0        |
|             | <b>Total Hours</b>                                                                                                                                                      | <b>64</b>                | <b>26</b> | <b>0</b> |

L-Lecture, T-Tutorial and P-Practical and Practices

### Reading List

1. Alexander J. W., 1963: *Economic Geography*, Prentice-Hall Inc., Englewood Cliffs, New Jersey.
2. Bagchi-Sen S. and Smith H. L., 2006: *Economic Geography: Past, Present and Future*, Taylor and Francis.
3. Coe N. M., Kelly P. F. and Yeung H. W., 2007: *Economic Geography: A Contemporary Introduction*, Wiley-Blackwell.
4. Combes P., Mayer T. and Thisse J. F., 2008: *Economic Geography: The Integration of Regions and Nations*, Princeton University Press.
5. Durand L., 1961: *Economic Geography*, Crowell.
6. Hodder B. W. and Lee R., 1974: *Economic Geography*, Taylor and Francis.
7. Wheeler J. O., 1998: *Economic Geography*, Wiley.
8. Willington D. E., 2008: *Economic Geography*, Husband Press.

### 3. DISASTER MANAGEMENT (GEOGP 304-1DSE)

|                                 |                                     |          |          |
|---------------------------------|-------------------------------------|----------|----------|
| <b>Course Code</b>              | <b>GEOGP 304-1DSE)</b>              |          |          |
| <b>Credits-6</b>                | <b>L</b>                            | <b>T</b> | <b>P</b> |
|                                 | 65                                  | 25       | 0        |
| <b>Course Type</b>              | <b>Discipline Specific Elective</b> |          |          |
| <b>Lectures to be Delivered</b> | <b>90</b>                           |          |          |

**Note:** CCA and Annual Examination scheme is same as in Paper GEOGP101 CC

#### Course Content and Credit Scheme

| Unit        | Topic                                                                                                                                                                    | Allotted Time |    |   |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----|---|
|             |                                                                                                                                                                          | L             | T  | P |
| <b>I.</b>   | <b>Introduction</b><br>Definition and Concepts.: Hazards, Risk, Vulnerability and Disasters                                                                              | 16            | 6  | 0 |
| <b>II.</b>  | <b>Disasters in India:</b><br>Causes, Impact, Distribution: Landslide, Earthquake, and Cyclone                                                                           | 16            | 6  | 0 |
| <b>III.</b> | <b>Human Induced Disasters:</b><br>Causes, Impact, Distribution: Forest Fire, Road Accidents                                                                             | 16            | 6  | 0 |
| <b>IV.</b>  | <b>Response and Mitigation to Disasters:</b><br>Mitigation and Preparedness,<br>NDMA and NIDM<br>Community Based Disaster Management<br>Do's and Don'ts During Disasters | 16            | 8  | 0 |
|             | <b>Total Hours</b>                                                                                                                                                       | 64            | 26 | 0 |

L-Lecture, T-Tutorial and P-Practical and Practices

#### Text Book(s):

#### Reading List

1. Government of India. (1997) Vulnerability Atlas of India. New Delhi, Building Materials & Technology Promotion Council, Ministry of Urban Development, Government of India.
2. Kapur, A. (2010) Vulnerable India: A Geographical Study of Disasters, Sage Publication, New Delhi.
3. Modh, S. (2010) Managing Natural Disaster: Hydrological, Marine and Geological Disasters, Macmillan, Delhi.
4. Singh, R.B. (2005) Risk Assessment and Vulnerability Analysis, IGNOU, New Delhi. Chapter 1, 2 and 3
5. Singh, R. B. (ed.), (2006) Natural Hazards and Disaster Management: Vulnerability and Mitigation, Rawat Publications, New Delhi.
6. Sinha, A. (2001). Disaster Management: Lessons Drawn and Strategies for Future, New United Press, New Delhi.
7. Stoltman, J.P. et al. (2004) International Perspectives on Natural Disasters, Kluwer Academic Publications. Dordrecht.
8. Singh Jagbir (2007) "Disaster Management Future Challenges and Opportunities", 2007. Publisher- I.K. International Pvt. Ltd. S-25, Green Park Extension, Uphaar Cinema Market, New Delhi, India ([www.ikbooks.com](http://www.ikbooks.com)).

## 2. GEOGRAPHY OF TOURISM (GEOGP 304-2DSE)

|                                 |                                     |           |          |
|---------------------------------|-------------------------------------|-----------|----------|
| <b>Course Code</b>              | <b>(GEOGP 304-2DSE)</b>             |           |          |
| <b>Credits-6</b>                | <b>L</b>                            | <b>T</b>  | <b>P</b> |
|                                 | <b>65</b>                           | <b>25</b> | <b>0</b> |
| <b>Course Type</b>              | <b>Discipline Specific Elective</b> |           |          |
| <b>Lectures to be Delivered</b> | <b>90</b>                           |           |          |

**Note:** CCA and Annual Examination scheme is same as in Paper GEOGP 101 CC

### Course Content and Credit Scheme

| Unit        | Topic                                                                                                                               | Allotted Time (Hours) |           |          |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------|----------|
|             |                                                                                                                                     | L                     | T         | P        |
| <b>I.</b>   | <b>Introduction</b><br>Concept, Nature and Scope<br>Types of Tourism: Nature Tourism, Cultural Tourism, Medical Tourism, Pilgrimage | 16                    | 6         | 0        |
| <b>II.</b>  | <b>Recent Trends of Tourism</b><br>International and Regional; Domestic (India); Eco- Tourism, Sustainable Tourism                  | 16                    | 6         | 0        |
| <b>III.</b> | <b>Impact of Tourism on</b><br>Environment and Society                                                                              | 16                    | 6         | 0        |
| <b>IV.</b>  | <b>Tourism in India:</b><br>Tourism Infrastructure: A Case Study of Himachal Pradesh<br>State Tourism Policy of Himachal Pradesh    | 16                    | 8         | 0        |
|             | <b>Total Hours</b>                                                                                                                  | <b>64</b>             | <b>26</b> | <b>0</b> |

L-Lecture, T-Tutorial and P-Practical and Practices

#### Text Book(s):

#### Reading List

1. Dhar, P.N. (2006) International Tourism: Emerging Challenges and Future Prospects. Kanishka, New Delhi.
2. Hall, M. and Stephen, P. (2006) Geography of Tourism and Recreation – Environment, Place and Space, Routledge, London.
3. Kamra, K. K. and Chand, M. (2007) Basics of Tourism: Theory, Operation and Practise, Kanishka Publishers, Pune.
4. Page, S. J. (2011) Tourism Management: An Introduction, Butterworth-Heinemann- USA. Chapter 2.
5. Raj, R. and Nigel, D. (2007) Morpeth Religious Tourism and Pilgrimage Festivals Management: An International perspective by, CABI, Cambridge, USA, [www.cabi.org](http://www.cabi.org).
6. Tourism Recreation and Research Journal, Center for Tourism Research and Development, Lucknow
7. Singh Jagbir (2014) “Eco-Tourism” Published by - I.K. International Pvt. Ltd. S-25, Green Park Extension, Uphaar Cinema Market, New Delhi, India ([www.ikbooks.com](http://www.ikbooks.com)).

## Generic Elective (2)

### 1. DISASTER RISK REDUCTION (GEOGP 305-GEI)

|                                 |                         |           |          |
|---------------------------------|-------------------------|-----------|----------|
| <b>Course Code</b>              | <b>(GEOGP 305-GEI)</b>  |           |          |
| <b>Credits-6</b>                | <b>L</b>                | <b>T</b>  | <b>P</b> |
|                                 | <b>65</b>               | <b>25</b> | <b>0</b> |
| <b>Course Type</b>              | <b>Generic Elective</b> |           |          |
| <b>Lectures to be Delivered</b> | <b>90</b>               |           |          |

**Note:** CCA and Annual Examination scheme is same as in Paper GEOGP101 CC

#### Course Content and Credit Scheme

| Unit        | Topic                                                                                                                                                     | Allotted Time (Hours) |           |          |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------|----------|
|             |                                                                                                                                                           | L                     | T         | P        |
| <b>I.</b>   | <b>Introduction</b><br>Hazards, Risk, Vulnerability and Disasters: Definition and Concept.                                                                | 16                    | 7         | 0        |
| <b>II.</b>  | <b>Disasters in India:</b><br>Causes , Impact and Distribution of Flood and Flash Flood, Earthquake and Cyclone                                           | 16                    | 6         | 0        |
| <b>III.</b> | <b>Human Induced Disasters</b><br>Causes, Impact, Distribution and Mapping.                                                                               | 16                    | 6         | 0        |
| <b>IV.</b>  | <b>Disaster Risk Reduction</b><br>Mitigation and Preparedness<br>NDMA and NIDM<br>Community-Based Disaster Management<br>Do's and Don'ts During Disasters | 17                    | 6         | 0        |
|             | <b>Total Hours</b>                                                                                                                                        | <b>65</b>             | <b>25</b> | <b>0</b> |

L-Lecture, T-Tutorial and P-Practical and Practices

#### Reading List

1. Government of India. (1997) Vulnerability Atlas of India. New Delhi, Building Materials & Technology Promotion Council, Ministry of Urban Development, Government of India.
2. Kapur, A. (2010) Vulnerable India: A Geographical Study of Disasters, Sage Publication, New Delhi.
3. Modh, S. (2010) Managing Natural Disaster: Hydrological, Marine and Geological Disasters, Macmillan, Delhi.
4. Singh, R.B. (2005) Risk Assessment and Vulnerability Analysis, IGNOU, New Delhi. Chapter 1, 2 and 3
5. Singh, R. B. (ed.), (2006) Natural Hazards and Disaster Management: Vulnerability and Mitigation, Rawat Publications, New Delhi.
6. Sinha, A. (2001). Disaster Management: Lessons Drawn and Strategies for Future, New United Press, New Delhi.
7. Stoltman, J.P. et al. (2004) International Perspectives on Natural Disasters, Kluwer Academic Publications. Dordrecht.
8. Singh Jagbir (2007) "Disaster Management Future Challenges and Opportunities", 2007. Publisher- I.K. International Pvt. Ltd. S-25, Green Park Extension, Uphaar Cinema Market, New Delhi, India (www.ikbooks.com).

## 2. SUSTAINABILITY AND DEVELOPMENT (GEOGP 306-GE2)

|                                 |                         |           |          |
|---------------------------------|-------------------------|-----------|----------|
| <b>Course Code</b>              | <b>(GEOGP 306-GE2)</b>  |           |          |
| <b>Credits-6</b>                | <b>L</b>                | <b>T</b>  | <b>P</b> |
|                                 | <b>65</b>               | <b>25</b> | <b>0</b> |
| <b>Course Type</b>              | <b>Generic Elective</b> |           |          |
| <b>Lectures to be Delivered</b> | <b>90</b>               |           |          |

**Note:** CCA and Annual Examination scheme is same as in Paper GEOGP101 CC

### Course Content and Credit Scheme

| Unit        | Topic                                                                                                                                                                | Allotted Time (Hours) |           |          |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------|----------|
|             |                                                                                                                                                                      | L                     | T         | P        |
| <b>I.</b>   | <b>Introduction</b><br>Sustainability: Concept, Components                                                                                                           | 16                    | 7         | 0        |
| <b>II.</b>  | <b>The Millennium Development Goals:</b><br>National Strategies and International Experiences<br>Sustainable Development: Need and its realization in Indian context | 16                    | 6         | 0        |
| <b>III.</b> | <b>Inclusive Development:</b><br>Education, Health<br>Role of higher education in achieving sustainability<br>Policies and Global Cooperation for Climate Change     | 16                    | 6         | 0        |
| <b>IV.</b>  | <b>Sustainable Development Policies and Programmes:</b><br>Rio+20, Financing for Sustainable Development; National Environmental Policy                              | 17                    | 6         | 0        |
|             | <b>Total Hours</b>                                                                                                                                                   | <b>65</b>             | <b>25</b> | <b>0</b> |

L-Lecture, T-Tutorial and P-Practical and Practices

### Reading List

1. Agyeman, Julian, Robert D. Bullard and Bob Evans (Eds.) (2003) Just Sustainabilities: Development in an Unequal World. London: Earthscan. (Introduction and conclusion.).
2. Ayers, Jessica and David Dodman (2010) "Climate change adaptation and development I: the state of the debate". Progress in Development Studies 10 (2): 161-168.
3. Baker, Susan (2006) Sustainable Development. Milton Park, Abingdon, Oxon; New York, N.Y.: Routledge. (Chapter 2, "The concept of sustainable development").
4. Brosius, Peter (1997) "Endangered forest, endangered people: Environmentalist representations of indigenous knowledge", Human Ecology 25: 47-69.
5. Lohman, Larry (2003) "Re-imagining the population debate". Corner House Briefing 28.
6. Martínez-Alier, Joan et al (2010) "Sustainable de-growth: Mapping the context, criticisms and future prospects of an emergent paradigm" Ecological Economics 69: 1741-1747.
7. Merchant, Carolyn (Ed.) (1994) Ecology. Atlantic Highlands, N.J: Humanities Press. (Introduction, pp 1-25.)
8. Osorio, Leonardo et al (2005) "Debates on sustainable development: towards a holistic view of reality". Environment, Development and Sustainability 7: 501-518.
9. Robbins, Paul (2004) Political Ecology: A Critical Introduction. Blackwell Publishing.