

**Netaji Subhas Open University**  
**Under Graduate Degree Programme**  
**Choice Based Credit System (CBCS)**  
**Subject : Honours in Geography (HGR)**  
**Course : Cartographic Techniques Lab & Thematic Mapping**  
**and Surveying Lab**  
**Course Code : CC-GR-01**

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**UG : Geography  
(HGR)**

**Course : Cartographic Techniques Lab & Thematic Mapping  
and Surveying Lab**

**Course Code : CC-GR-01**

<b>Unit - 1</b>	□ Scales and their construction : Linear, Diagonal and Vernier	7 - 17
<b>Unit - 2</b>	□ Projections and their construction : Polar Zenithal Stereographic, Simple Conic with One Standard Parallel, Bonne's, Cylindrical Equal Area and Mercator's	18 - 36
<b>Unit - 3</b>	□ Diagrammatic Representation of Data : Line and Bar	37 - 45
<b>Unit - 4</b>	□ Representation of Point Data: Isopleths	46 - 48
<b>Unit - 5</b>	□ Representation of Area Data : Dots and Choropleth	49 - 55
<b>Unit - 6</b>	□ Preparation of Thematic Maps : Proportional Squares, Proportional Pie Diagrams, Dots and Spheres	56 - 65

<b>Unit - 7</b>	□ Traverse Survey using Prismatic Compass	66 - 76
<b>Unit - 8</b>	□ Levelling and Contouring using Dumpy Level and Prismatic Compass	77 - 102

**Under Graduate Degree Programme**  
**Choice Based Credit System (CBCS)**  
**Subject: Honours in Geography (HGR)**

**Geomorphology and Climatology Laboratory (Practical)**  
**Course Code : CC-GR-02**

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**GEOMORPHOLOGY AND CLIMATOLOGY LABORATORY  
[CC-GR-02]**

**Module 1 : Geotectonics and Geomorphology Laboratory**

<b>Unit 1</b>	<input type="checkbox"/> Interpretation of Indian Topographical Sheets	9-45
<b>Unit 2</b>	<input type="checkbox"/> Relative Relief map, Slope map (Wentworth)	46-53
<b>Unit 3</b>	<input type="checkbox"/> Correlation between physical and cultural features from topographical map	54-97
<b>Unit 4</b>	<input type="checkbox"/> Delineation of Drainage Basin and Construction of Hypsometric Curve	98-109
<b>Unit 5</b>	<input type="checkbox"/> Megascopic Identification of Minerals and Rocks	110-135
<b>Unit 6</b>	<input type="checkbox"/> Measurement of dip and strike using Clinometer	136-138
<b>Unit 7</b>	<input type="checkbox"/> Preparation and Interpretation of Simple Geological Map	139-163

**Module 2 : Climatology Laboratory**

<b>Unit 1</b>	<input type="checkbox"/> Measurement of Weather Elements using Analogue Instruments: Mean daily temperature, Air pressure	167-180
<b>Unit 2</b>	<input type="checkbox"/> Interpretation of a Daily Weather Map of India	181-209
<b>Unit 3</b>	<input type="checkbox"/> Construction and Interpretation of Climograph	210-214
<b>Unit 4</b>	<input type="checkbox"/> Construction and Interpretation of Wind Rose	215-216
<b>Unit 5</b>	<input type="checkbox"/> Construction and Interpretation of Climatic Chart	217-221
<b>Unit 6</b>	<input type="checkbox"/> Construction and Interpretation of Ombrothermic Chart	222-227

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**Course : Geotectonics and Geomorphology**

**Course Code : CC-GR-03**

<b>Unit 1</b>	<b>□ Earth's tectonic and structural evolution with reference to geological time scale</b>	<b>7-33</b>
<b>Unit 2</b>	<b>□ Earth's interior with special reference to seismology. Isostasy : Models of Airy and Pratt</b>	<b>34-59</b>
<b>Unit 3</b>	<b>□ Plate Tectonics : Processes at constructive, conservative, destructive margins and hotspots; resulting landforms</b>	<b>60-75</b>
<b>Unit 4</b>	<b>□ Folds and Faults—origin and types</b>	<b>76-102</b>
<b>Unit 5</b>	<b>□ Degradational processes : Weathering, mass wasting and resultant landforms</b>	<b>103-129</b>
<b>Unit 6</b>	<b>□ Processes of entrainment, transportation and deposition by different geomorphic agents. Role of humans in landform development</b>	<b>130-136</b>

<b>Unit 7</b>	<b>❑ Development of river network and landforms on uniclinal and folded structures</b>	137-148
<b>Unit 8</b>	<b>❑ Landforms on igneous rocks with special reference to Granite and Basalt</b>	149-164
<b>Unit 9</b>	<b>❑ Karst landforms : Surface and sub-surface</b>	165-173
<b>Unit 10</b>	<b>❑ Glacial and fluvio-glacial processes and landforms; fluvio-glacial landforms</b>	174-188
<b>Unit 11</b>	<b>❑ Aeolian and fluvio-aeolian processes and landforms; fluvio-aeolian processes</b>	189-203
<b>Unit 12</b>	<b>❑ Models on landscape evolution : Views of Davis, Penck, King and Hack</b>	204-220



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**Human Geography  
[CC - GR - 04]**

**Module - 1 □ Nature and Principles of Human Geography**

Unit-1 □ Nature and scope and recent trends. Elements of Human geography	9-17
Unit-2 □ Approaches to the study of Human geography	18-20
Unit-3 □ Evolution of human, concept of race and ethnicity	21-33
Unit-4 □ Space, Society and Cultural regions (language and religion)	34-50

**Module - 2 □ Society, Demography and Ekistics**

Unit-1 □ Evolution of human societies	53-57
Unit-2 □ Human adaption to environment : Eskimo, Masai, Jarwa, Gaddi, Santhals.	58-62
Unit-3 □ Population growth and distribution, Population Composition; Demographic Transition Model.	63-73
Unit-4 □ Population-Resource Regions (Ackerman)	74-76
Unit-5 □ Human population and environment with special referance to development environment conflict	77-79
Unit-6 □ Social morphology and Rural House Types in India	80-84
Unit-7 □ Types and patterns of rural settlements	85-89
Unit-8 □ Types and patterns of urban settlements	90-100

## **Netaji Subhas Open University**

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Course Title : Nationalism in India  
Course Code : GE-PS-11

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**Course Title : Nationalism in India  
GE-PS - 11**

**MODULE – I : Approaches to the Study of Nationalism in India**

<b>Unit 1</b>	<input type="checkbox"/> Nationalist	09 – 13
<b>Unit 2</b>	<input type="checkbox"/> Imperialist	14 – 18
<b>Unit 3</b>	<input type="checkbox"/> Marxist	19 – 23
<b>Unit 4</b>	<input type="checkbox"/> Postcolonial Interpretations	24 – 30
<b>Unit 5</b>	<input type="checkbox"/> An Evaluation	31 – 35

**MODULE – II : Nationalist Politics and Movements**

<b>Unit 6</b>	<input type="checkbox"/> Reformism and Conservatism in the Nineteenth Century	37 – 47
<b>Unit 7</b>	<input type="checkbox"/> Phases of Nationalist Movement : Liberal Constitutionalists, Swadeshi	48 – 56
<b>Unit 8</b>	<input type="checkbox"/> Gandhi and Mass Mobilization : Non-Cooperation and Civil Disobedience	57 – 64
<b>Unit 9</b>	<input type="checkbox"/> Congress Socialists	65 – 73
<b>Unit 10</b>	<input type="checkbox"/> Communists and Radicals	74 – 81

**MODULE – III : Social Movements**

<b>Unit 11</b>	<input type="checkbox"/> The Women's Question : Participation in the National Movement and its Impact	83 – 90
<b>Unit 12</b>	<input type="checkbox"/> Caste Question	91 – 98
<b>Unit 13</b>	<input type="checkbox"/> Peasant Movements	99 – 106
<b>Unit 14</b>	<input type="checkbox"/> Tribal Movements	107 – 114
<b>Unit 15</b>	<input type="checkbox"/> Workers' Movements	115 – 121

## **MODULE – IV : Towards Independence**

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<b>Unit 16</b>	<input type="checkbox"/> Quit India Movement and INA Movement	123 – 136
<b>Unit 17</b>	<input type="checkbox"/> Communalism in Indian Politics	137 – 146
<b>Unit 18</b>	<input type="checkbox"/> The Two - Nation Theory	147 – 157
<b>Unit 19</b>	<input type="checkbox"/> Negotiations over Partition	158 – 168
<b>Unit 20</b>	<input type="checkbox"/> Making of the Indian Constitution	169 – 180

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**Module-I : Ancient Bengal : Geography, Regional Subdivision  
and Population Structure**

<b>Unit - 1</b>	□ Eastern India : Geography	13 – 19
<b>Unit - 2</b>	□ Historical divisions of Early Bengal	20 – 29
<b>Unit - 3</b>	□ The Population Structure	30 – 36

**Module-II : Early History of Bengal up to 320 A.D.**

<b>Unit - 4</b>	□ Bengal in the Classical Literature : Gangaridai	39 – 47
<b>Unit - 5</b>	□ Bengal before the Gupta Rule : Bengal under the Guptas	48 – 54

**Module-III : Bengal during the Guptas and Post-Gupta**

<b>Unit - 6</b>	□ Independent Kingdoms in Bengal	57 – 60
<b>Unit - 7</b>	□ The Kingdom of Samatata or Vanga	61 – 68
<b>Unit - 8</b>	□ Rise of Gauda	69 – 75
<b>Unit - 9</b>	□ Sasanka	76 – 82



## **Module-IV : The Pala Empire**

<b>Unit - 10</b> □ Condition of Bengal before the Formation of Pala Empire	85 – 90
<b>Unit - 11</b> □ The Origin and the Early History of the Palas	91 – 97
<b>Unit - 12</b> □ The Pala Empire : Dharmapala and Devpala	98 – 106
<b>Unit - 13</b> □ The Decline and the Fall of Pala Empire	107 – 112
<b>Unit - 14</b> □ Independent kingdoms during the Pala Period—the Chandras and the Varmanas	113 – 118

## **Module-V : The Senas**

<b>Unit - 15</b> □ The Origin of Sena Kings	121 – 125
<b>Unit - 16</b> □ The Sena Kings—Samanta Sena to Lakshmana Sena	126 – 134
<b>Unit - 17</b> □ The Successors of Lakshmana Sena	135 – 140

## **Module-VI : Administration, Economy, Society**

<b>Unit - 18</b> □ Overview of the Administration : Basic Features and Evolution	143 – 153
<b>Unit - 19</b> □ The Condition of Economy and Social Formation	154 – 169
<b>Unit - 20</b> □ Bengali Society—Literature, Cultural Pattern, Religious Tradition	170 – 180

**Netaji Subhas Open University**  
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**Subject : Honours in Sociology (HSO)**  
**Indian Society**  
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**Course Title : Indian Society**

**Course Code : GE-SO-11**

**MODULE – 1 : Ideas of India : Civilization, Colony, Nation,  
and Society**

<b>Unit - 1</b>	<input type="checkbox"/> Dynamics of Indian Civilization : An Overview	9 – 21
<b>Unit - 2</b>	<input type="checkbox"/> Religious, Linguistic and Cultural Plurality : Unity in Diversity	22 – 38
<b>Unit - 3</b>	<input type="checkbox"/> Great Tradition and Little Tradition	39 – 52
<b>Unit - 4</b>	<input type="checkbox"/> Nation Building : Issues and Challenges	53 – 66

**MODULE – 2 : Institutions and Processes**

<b>Unit - 5</b>	<input type="checkbox"/> Village, Town, and Region	69 – 84
<b>Unit - 6</b>	<input type="checkbox"/> Religion : Its Functions	85 – 100
<b>Unit - 7</b>	<input type="checkbox"/> Family : Concept, Types and Functions	101 – 116
<b>Unit - 8</b>	<input type="checkbox"/> Gender : Types, Roles and Functions	117 – 130
<b>Unit - 9</b>	<input type="checkbox"/> Ethnic Groups and Their Distinctions	131 – 148

### **MODULE – 3 : Kinship and Marriage**

**Unit - 10** □ Kinship and Marriage : Meaning and Types 151 – 167

**Unit - 11** □ Changes in Kinship and Marriage : Nature and Factors 168 – 186

**Unit - 12** □ Relevance of Marriage, Family, and Kinship Today 187 – 203

### **MODULE – 4 : Social Stratification in India**

**Unit - 13** □ Varna, Caste and Jati : Changing Dimensions 205 – 221

**Unit - 14** □ Bourgeoisie, Working Class and Middle Classes 222 – 238

**Unit - 15** □ Scheduled Castes, Scheduled Tribes and other  
Backward Classes 239 – 258

**Unit - 16** □ Religious Minorities and Ethnic Groups : Issues  
and Problems 259 – 277

### **MODULE – 5 : Social Change**

**Unit - 17** □ Social Mobility 279 – 294

**Unit - 18** □ Sanskritization 295 – 310

**Unit - 19** □ Urbanization 311 – 327

**Unit - 20** □ Westernization 328 – 344

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**UG : Political Science  
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## **Module-1 Introduction**

Unit-1 □ What is Feminism?	9-20
Unit-2 □ Distinction between Sex and Gender	21-29
Unit-3 □ Biologism and Social Constructivism	30-37
Unit-4 □ Private—Public divide	38-47
Unit-5 □ Diaspora and Hybridity: Changing ways of representation	48-58

## **Module-2 Feminist Tradition**

Unit-6 □ Understanding Patriarchy	61-70
Unit-7 □ Liberal Feminism	71-79
Unit-8 □ Socialist Feminism	80-88
Unit-9 □ Radical Feminism	89-98
Unit-10 □ New Feminism	99-103

### **Module-3 Feminism in Practice**

Unit-11 □ Feminism in the West	107-119
Unit-12 □ Feminism in the Socialist Countries	120-129
Unit-13 □ Islam and Feminism in West Asia	130-139
Unit-14 □ Social Reform Movements and the Women's Question in Colonial India	140-149
Unit-15 □ Women's Movement in India	150-158

### **Module-4 Women, Law and Labour**

Unit-16 □ Domesticity and Domestic Labour	161-168
Unit-17 □ Industrialization and Women's Work	169-177
Unit-18 □ Women in Peasant Movement	178-186
Unit-19 □ Women and Trade Union	187-195
Unit-20 □ Women, Law and Property Rights	196-204



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**Module-I : Eastern India : Political Development (1201–1575)**

<b>Unit - 1</b>	□ Advent of Islam in Eastern India	185 – 198
<b>Unit - 2</b>	□ Bengal under the Mameluks (1227 - 87 CE)	199 – 207
<b>Unit - 3</b>	□ Bengal under Iliyash Shahi Dynasty	208 – 215
<b>Unit - 4</b>	□ Bengal under the Hussain Shahi Dynasty	216 – 223
<b>Unit - 5</b>	□ Afghan Rule in Bengal	224 – 234

**Module-II : Eastern India : Political Development (1575–1757)**

<b>Unit - 6</b>	□ Mughal Conquest of Bihar and Bengal	237 – 246
<b>Unit - 7</b>	□ Bengal under Jahangir and Shah Jahan	247 – 256
<b>Unit - 8</b>	□ Bengal under Aurangzeb	257 – 264
<b>Unit - 9</b>	□ The Rise of Murshid Quli Khan	265 – 271
<b>Unit - 10</b>	□ The Development of Nawabi Bengal as a Regional Power	272 – 282
<b>Unit - 11</b>	□ Bengal under Siraj-ud-dwala	283 – 289
<b>Unit - 12</b>	□ The Battle of Plassey (1757) : Impact	290 – 299

### **Module-III : Medieval Bengal : Economy and Society**

<b>Unit - 13</b> □ The Medieval Agrarian Structure : Evolution of the Zamindar Class and Talukdari System : Peasant Society and Process of Peasantization	303 – 312
<b>Unit - 14</b> □ The Economy : Indigenous Trade and the Role of the Foreign Companies	313 – 325
<b>Unit - 15</b> □ Urbanization in Medieval Bengal	326 – 335
<b>Unit - 16</b> □ Society and Literature : An Overview	336 – 342

### **Module-IV : Medieval Eastern India : Religion and Culture**

<b>Unit - 17</b> □ Religious Traditions	345 – 354
<b>Unit - 18</b> □ Sufism in Bengal	355 – 363
<b>Unit - 19</b> □ Rise and Growth of Vaishnavism : The Bhakti Cult	364 – 370
<b>Unit - 20</b> □ The Jagannath Cult : Formation, Features and Impact	371 – 376

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**Module I : Introducing Population Studies**

- Unit 1** □ **Social Demography—Nature and Scope** 7-24  
**Unit 2** □ **Approaches to Study of Demography** 25-37

**Module II : Theories of Population**

- Unit 3** □ **Pre-Malthusian theories of population** 38-52  
**Unit 4** □ **Malthusian theories of population** 53-66  
**Unit 5** □ **Theory of optimum population** 67-81  
**Unit 6** □ **Marxist theory of population** 82-91  
**Unit 7** □ **Theory of Demographic transition** 92-106

**Module III : Population, Social Structure and Processes**

- Unit 8** □ **Population size and growth, Population explosion** 107-125  
**Unit 9** □ **Fertility and Reproduction: Determining factors** 126-139

**Module IV : Mortality, Morbidity and Health**

- Unit 10** □ **Mortality—Trends, Levels, and Determinants in India** 140-157  
**Unit 11** □ **Health, Sanitation, and Morbidity: Issues and problems** 158-176

## **Module V : Migration**

<b>Unit 12</b> □ <b>Migration: Types and problems</b>	177-194
<b>Unit 13</b> □ <b>Politics of migration</b>	195-210
<b>Unit 14</b> □ <b>Migration, Integration, and Assimilation: Issues and problems</b>	211-228
<b>Unit 15</b> □ <b>Displacement and Rehabilitation: Problems and policies</b>	229-247

## **Module VI : Population, Development and Environment**

<b>Unit 16</b> □ <b>Population Growth, Environment and Sustainable Development: The Interrelationship</b>	248-265
<b>Unit 17</b> □ <b>Human development Index</b>	266-285

## **Module VII : Population Dynamics and Development**

<b>Unit 18</b> □ <b>Population as constraints and resources for development</b>	286-303
<b>Unit 19</b> □ <b>Population programmes and policies</b>	304-321
<b>Unit 20</b> □ <b>Women Empowerment: Its Demographic Consequences</b>	322-339

**নেতাজি সুভাষ মুক্ত বিশ্ববিদ্যালয়**  
**স্নাতক পাঠক্রম**  
**এবিএলিটি এনহান্সমেন্ট কম্পালসরি কোর্স : বাংলা**  
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**[AE-BG-11]**

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মডিউল : ২ Module : 2 একক : ১, ২, ৩, ৪	বাণীমঞ্জরী দাস	অধ্যাপক মননকুমার মণ্ডল

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**[AE-BG-11]**

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**মডিউল-১ (বাংলা ভাষা ও সাহিত্য)**

একক-১	□ বাংলা সাহিত্যের ইতিহাস (প্রাচীন ও মধ্যযুগ)	9 – 20
একক-২	□ বাংলা সাহিত্যের ইতিহাস (আধুনিক যুগ)	21 – 28
একক-৩	□ ধ্বনি, বাংলা লিপি	29 – 39
একক-৪	□ সন্ধি, গহ্ব-যত্ন বিধি, বাক্য সংকোচন, বাক্য গঠন, সাধু ও চলিত ভাষা	40 – 61

**মডিউল-২ (বাংলা সাহিত্য : নির্বাচিত পাঠ)**

একক-১	□ কবিতা : ভারততীর্থ—রবীন্দ্রনাথ ঠাকুর, আবার আসিব ফিরে—জীবনানন্দ দাশ	65 – 76
একক-২	□ প্রবন্ধ : পতঙ্গ—বঙ্কিমচন্দ্র চট্টোপাধ্যায়, লাইব্রেরি—রবীন্দ্রনাথ ঠাকুর	77 – 87
একক-৩	□ ভারতবর্ষের সংস্কৃতি—বর্তমান ভারত—বিবেকানন্দ তরণের স্বপ্ন—সুভাষচন্দ্র বসু	88 – 103
একক-৪	□ বঙ্কুবাবুর বন্ধু—সত্যজিৎ রায়	104 – 115



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**Module – 1 (Prose Selections-I)**

Unit 1 : Subhas Chandra Bose : ‘An Indian Pilgrim’	9
Unit 2 : Ruskin Bond : ‘All you need is paper’	20
Unit 3 : Ved Mehta : ‘A World of Four Senses’	33

**Module – 2 (Prose Selections-II)**

Unit 4 : Indira Gandhi : ‘Human Environment’	55
Unit 5 : Bertrand Russell : ‘Science and Human Life’	68
Unit 6 : Jawaharlal Nehru : ‘The Voice of India’	82

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কিশোর সেনগুপ্ত  
নিবন্ধক



# নেতাজি সুভাষ মুক্ত বিশ্ববিদ্যালয়

নির্বাচন ভিত্তিক মূল্যায়ন ব্যবস্থা

(Choiced Based Credit System)

পরিবেশ বিদ্যা

(Environmental Studies)

AE-ES-21

একক 1 □	পরিবেশের মৌলিক ধারণা (Fundamentals of Environment)	7-21
একক 2 □	প্রাকৃতিক সম্পদ : নবীকরণযোগ্য এবং অনবীকরণযোগ্য (Natural Resource:Renewable and Non renewable)	22-40
একক 3 □	বাস্তুতন্ত্র (Ecosystem)	41-57
একক 4 □	জীববৈচিত্র্য ও তার সংরক্ষণ (Biodiversity and its conservation)	58-70
একক 5 □	পরিবেশ দূষণ (Environmental Pollution)	71-110
একক 6 □	পরিবেশগত সমস্যা, নীতি এবং চর্চা (Environmental Issues, Policies and Practices)	111-129
একক 7 □	জনসংখ্যা ও পরিবেশ (Human Population and Environment)	130-142

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**Choice Based Credit System (CBCS)**  
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**Course : Statistical Methods in Geography Laboratory and**  
**Human Geography Laboratory**  
**Course Code : CC - GR - 05**  
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**Course : Statistical Methods in Geography Laboratory and  
Human Geography Laboratory  
Course Code : CC - GR - 05**

**Module - 1 □ Statistical Methods : Theoretical Basis**

Unit-1 □	Discrete and continuous data, population and samples, scales of measurements- Nominal, Ordinal, Interval and Ratio, Sources of data, collection of data and formation of Statistical tables	9-23
Unit-2 □	Theoretical distribution: frequency cumulative frequency, normal, Sampling: need, types and Significance and methods of random sampling	24-35
Unit-3 □	Central Tendency-Mean, median, mode, partition values	36-60
Unit-4 □	Measures of Dispersion–Mean deviation, Standard Deviation, Co-efficient of Variation	61-77
Unit-5 □	Association- and Correlation: Rank correlation Product Moment correlation	78-86
Unit-6 □	Linear Regression	87-90
Unit-7 □	Time Series Analysis	91-95

**Module - 2 □ Statistical Methods in Geography Laboratory:  
List of Practical**

Unit 1 □	Construction of Data Matrix with each row representing an aerial unit (districts/Blocks/Mouzas/Towns) and columns representing relevant attributes.	98-104
Unit 2 □	Frequency Table – Computation and Interpretation	104-115
Unit 3 □	Measures of Central Tendency	116-123
Unit 4 □	Measures Of Dispersion	124-131
Unit 6 □	Plotting of Scatter Diagram and Regression Line based on Sample Data	132-145
Unit 7 □	Drawing of Time Series graphs and Trend Line by Moving Average Method	146-154

### **Module - 3 □ Human Geography Laboratory**

Unit-1 □	Spatial Variation in continent or country-level religious composition by Divided proportional Circles.	157-160
Unit-2 □	Decadal Growth Rate of Population	161-170
Unit-3 □	Types of age-sex pyramids : Graphical representation and analysis	171-175
Unit-4 □	Nearest Neighbour Analysis from SOI (R.F. - 1:50,000) Topographical Maps	176-180
Unit-5 □	Choropleth Mapping based on population data	181-185
Unit-6 □	Variation in occupational structure by proportional divided circles	186-192
Unit-7 □	Time Series Analysis of industrial production (India and West Bengal)	193-211
Unit-8 □	Transport Network Analysis by Shortest Path Method	212-215



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**Remote Sensing &  
GIS Laboratory  
and  
Research Methodology &  
Field work Laboratory**

**Module - 1 : Remote Sensing & GIS Laboratory**

<b>Unit - 1</b>	<b>□ Principles of Remote Sensing (RS) : Types of RS Satellites and Sensors</b>	<b>9 – 18</b>
<b>Unit - 2</b>	<b>□ Sensor Resolutions and their Applications</b>	<b>19 – 26</b>
<b>Unit - 3</b>	<b>□ Preparation of False Colour Composites from IRS LISS-3 &amp; Landsat TM Data</b>	<b>27 – 30</b>
<b>Unit - 4</b>	<b>□ Principles of Image Interpretation. Preparation of Inventories of Land Use and Land Cover (LULC) Features from Satellite Images</b>	<b>31 – 39</b>
<b>Unit - 5</b>	<b>□ GIS Data Structure : Types (Spatial and Non Spatial), Raster and Vector</b>	<b>40 – 43</b>
<b>Unit - 6</b>	<b>□ Principles of GNSS Positioning and way Point Collection</b>	<b>44 – 50</b>
<b>Unit - 7</b>	<b>□ Transferring of waypoint to GIS</b>	<b>51 – 53</b>
<b>Unit - 8</b>	<b>□ Area and Length Calculations from GNSS Data</b>	<b>54 – 57</b>
<b>Unit - 9</b>	<b>□ Georeferencing of Maps and Images</b>	<b>58 – 65</b>
<b>Unit - 10</b>	<b>□ Image Classification, Post Classification, Analysis and Editing</b>	<b>66 – 73</b>
<b>Unit - 11</b>	<b>□ Digitization of Features, Data Attachment, Overlay and Preparation of Thematic Map</b>	<b>74 – 88</b>
<b>Unit - 12</b>	<b>□ Collection and Plotting of way points by GPS</b>	<b>89 – 92</b>

## **Module - 2 : Research Methodology & Field work Laboratory**

<b>Unit - 1</b> □ Field Study and Preparation of Field Study Report	95 – 102
<b>Unit - 2</b> □ The Duration of the Field Work	103 – 131
<b>Unit - 3</b> □ Writing of Field Study Report	132 – 136
<b>Unit - 4</b> □ Concluding Remarks of the Field Study Report	137 – 140



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**CORE COURSE (CC)-7  
Paper Code : CC-GR-07  
Course : CLIMATOLOGY**

## **Module-1**

Unit-1	<input type="checkbox"/> Elements of the Atmosphere	9-17
Unit 2	<input type="checkbox"/> Insolation: Controlling factors. Heat budget of the Planet Earth	18-25
Unit 3	<input type="checkbox"/> Temperature: Horizontal and Vertical distribution. Inversion of Temperature	26-40
Unit 4	<input type="checkbox"/> Greenhouse Effect and Importance of Ozone Layer	41-61

## **Module-2**

Unit 1	<input type="checkbox"/> Condensation: Process and forms. Mechanism of Precipitation: Bergeron Findeisen Theory, Collision and Coalescence Theory. Forms of Precipitation	65-83
Unit 2	<input type="checkbox"/> Air mass: Origin and Characteristics	84-95
Unit 3	<input type="checkbox"/> Fronts: Warm and Cold; Frontogenesis and Frontolysis	96-106
Unit 4	<input type="checkbox"/> Weather Stability and Instability	107-110
Unit 5	<input type="checkbox"/> Circulation in the atmosphere: Planetary winds, Jet Stream	111-128
Unit 6	<input type="checkbox"/> Tropical Cyclone and Mid-Latitude Cyclones	129-144
Unit 7	<input type="checkbox"/> Monsoon Circulation and Mechanism with reference to India	145-161
Unit 8	<input type="checkbox"/> Climatic Classification after Köppen and Thornthwaite <input type="checkbox"/> Differences and Brief Notes	162-171 172-195

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**Course : Environmental Geography  
Course Code : CC-GR-08**

<b>Unit 1</b>	<b>☐ Geographers' approach to environmental studies</b>	<b>7-16</b>
<b>Unit 2</b>	<b>☐ Perception of environment in different stages of civilization</b>	<b>17-28</b>
<b>Unit 3</b>	<b>☐ Concept of holistic environment and system approach</b>	<b>29-34</b>
<b>Unit 4</b>	<b>☐ Ecosystem: Concept, structure and functions</b>	<b>35-49</b>
<b>Unit 5</b>	<b>☐ Wetland ecosystem with special reference to East Kolkata Wetlands</b>	<b>50-58</b>
<b>Unit 6</b>	<b>☐ Environmental pollution and degradation: Land, water and air</b>	<b>59-72</b>
<b>Unit 7</b>	<b>☐ Space–time hierarchy of environmental problems: Local, regional and global</b>	<b>73-84</b>

<b>Unit 8</b>	<b>□ Urban environmental issues with special reference to waste management and Rural environmental issues: Special reference to sanitation and public health</b>	<b>85-103</b>
<b>Unit 9</b>	<b>□ Environmental policies—Club of Rome, Earth Summits (special reference to Stockholm, Rio, Johannesburg)</b>	<b>104-115</b>
<b>Unit 10</b>	<b>□ Global initiatives for environmental management (special reference to Montreal, Kyoto, Paris)</b>	<b>116-121</b>
<b>Unit 11</b>	<b>□ Environmental Impact Assessment and Environmental Management Planning</b>	<b>122-134</b>
<b>Unit 12</b>	<b>□ Overview of principal environment-related regulations of India. Review of their achievements</b>	<b>135-145</b>
<b>Unit 13</b>	<b>□ Principles of wasteland management with special reference to West Bengal</b>	<b>146-151</b>
<b>Unit 14</b>	<b>□ Principles of forest management with special reference to West Bengal</b>	<b>152-160</b>



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UG. Geography  
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Honours in Geography (HGR)

Course Code : CC-GR-09

Course : HYDROLOGY AND OCEANOGRAPHY

## Module - 1 : Hydrology

Unit - 1	□ Systems Approach in Hydrology. Global Hydrological Cycle : Its physical and biological role	9 – 23
Unit - 2	□ Run off : Controlling Factors and Run off Cycle	24 – 29
Unit - 3	□ Infiltration and Evapo-Transpiration	30 – 37
Unit - 4	□ Drainage Basin as a Hydrological Unit	38 – 44
Unit - 5	□ Principles of Rainwater Harvesting and Watershed Management	45 – 54
Unit - 6	□ Groundwater : Occurance and Storage. Factors Controlling Recharge, Discharge and Movement	55 – 66

## Module - 2 : Oceanography

Unit - 1	□ Major Relief Features of the Ocean Floor : Characteristics and Origin According to Plate Tectonics	69 – 76
Unit - 2	□ Water Mass : Physical and Chemical Properties of Ocean Water, T-S Diagram	77 – 93
Unit - 3	□ Ocean Temperature and Salinity : Distribution and Determinants	94 – 107
Unit - 4	□ Air-Sea Interactions, Ocean Circulation, Wave and Tide	108 – 126
Unit - 5	□ Coral Reefs : Formation, Classification and Threats	127 – 140
Unit - 6	□ Marine Resources : Classification and Sustainable Utilization	141 – 166
Unit - 7	□ Sea Level Change : Types and Causes	167 – 177

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**Course : Economic Geography  
Course Code : CC-GR-10**

### **MODULE - I**

- |               |   |       |
|---------------|---|-------|
| <b>Unit 1</b> | □ Meaning and approaches to Economic Geography, New Economic Geography.                     | 9-13  |
| <b>Unit 2</b> | □ Concept in Economic Geography : Goods and Services, Production, Exchange and Consumption. | 14-19 |
| <b>Unit 3</b> | □ Concept of Economic Man   | 20-21 |
| <b>Unit 4</b> | □ Economic Distance and Transport Cost.   | 22-26 |

### **MODULE - II**

- |               |   |       |
|---------------|---|-------|
| <b>Unit 5</b> | □ Factors affecting location of economic activity with special references to agriculture (Von Thunen) and Industry (Weber).                             | 29-38 |
| <b>Unit 6</b> | □ Primary Activities : subsistence and commercial agriculture, forestry fishing and mining  | 39-43 |
| <b>Unit 7</b> | □ Secondary activities : manufacturing (Cotton textile, iron and steel). Concept of Manufacturing regions, special economic zones and technology parks. | 44-86 |

<b>Unit 8</b>	□ Tertiary Activities : transport, trade and service.	87-96
<b>Unit 9</b>	□ Agricultural System : Case studies of tea plantation in India and mixed farming in Europe.	97-108
<b>Unit 10</b>	□ Transnational sea-routes, railways, highways with reference to India	109-116
<b>Unit 11</b>	□ International agreements and trade blocks : GATT and OPEC.	117-121

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**UG-Geography  
(HGR)**

**Rural Development  
[ GE-GR-11 ]**

**Module - 1**

<b>Unit 1</b>	<input type="checkbox"/> Defining Development	<b>7-16</b>
<b>Unit 2</b>	<input type="checkbox"/> Paradigms of Rural Development	<b>17-32</b>
<b>Unit 3</b>	<input type="checkbox"/> Need for Rural Development	<b>33-47</b>
<b>Unit 4</b>	<input type="checkbox"/> Rural Economic Base	<b>48-60</b>
<b>Unit 5</b>	<input type="checkbox"/> Rural Co-operatives and Agricultural Marketing	<b>61-78</b>
<b>Unit 6</b>	<input type="checkbox"/> Area Based approach to Rural Development	<b>79-96</b>

**Module - 2**

<b>Unit 7</b>	<input type="checkbox"/> Target Group Approach to Rural Development	<b>97-108</b>
<b>Unit 8</b>	<input type="checkbox"/> Provision of Services	<b>109-134</b>
<b>Unit 9</b>	<input type="checkbox"/> Rural Governance: Panchayati Raj System	<b>135-151</b>
<b>Unit 10</b>	<input type="checkbox"/> Rural Development Policies and Programmes in India	<b>152-172</b>
<b>Unit 11</b>	<input type="checkbox"/> Rural Infrastructural Development Programmes	<b>173-189</b>
<b>Unit 12</b>	<input type="checkbox"/> Rural Development Programmes for Women and Children	<b>190-207</b>

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**Course : Geography of Tourism**  
**Course Code : GE - GR - 21**

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**Geography of Tourism  
Code : GE - GR - 21**

<b>Unit - 1</b>	☐ Scope and Content : Concepts and Issues, Tourism, Recreation and Leisure Interrelations; Geographical Parameters of Tourism	7-11
<b>Unit - 2</b>	☐ Types of Tourism : Ecotourism, Cultural Tourism, Adventure Tourism; Medical Tourism, Pilgrimage, International, National.	12-15
<b>Unit - 3</b>	☐ Factors influencing Tourism : Historical Natural, Socio-cultural and Economic.	16-18
<b>Unit - 4</b>	☐ Spatial pattern of Tourism : Domestic and International, areal and locational dimensions, comprising physical, cultural historical and economic.	19-20
<b>Unit - 5</b>	☐ Impact of Tourism : Physical, economic and social, perceptive positive and negative impacts.	21-22
<b>Unit - 6</b>	☐ Environmental laws and tourism – current trends, spatial patterns and recent changes.	23-26



<b>Unit - 7</b>	□ Role of Foreign Capital and impact of Globalisation on Tourism	27-30
<b>Unit - 8</b>	□ Recent Trends of Tourism : International and Regional, Domestic (India) Sustainable Tourism, Meeting Incentives Conventions and Exhibitions (MICE)	31-35
<b>Unit - 9</b>	□ Tourism in India : Tourism Infrastructure, Regional Dimensions of tourist attraction. Case Studies of Dal Lake, Goa, Garhwal Himalaya, Desert and Coastal areas.	36-42
<b>Unit - 10</b>	□ Promotion of Tourism : National Tourism Policy.	43-46
<b>Unit - 11</b>	□ Infrastructure and Support System : Accomodation and Supplementary accommodation, other facilities and amenities.	47-49
<b>Unit - 12</b>	□ Tourism Circuits–Short and Longer detraction–Agencies and Intermedearies–Indian Hotel Industry	50-54



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## **MODULE - 1**

<b>Unit - 1</b>	<b>☐ THE SCIENCE OF CLIMATE CHANGE : ORIGIN, SCOPE AND TRENDS</b>	<b>7-16</b>
<b>Unit - 2</b>	<b>☐ UNDERSTANDING CLIMATE CHANGE WITH REFERENCE TO GEOLOGICAL TIME SCALE</b>	<b>17-25</b>
<b>Unit - 3</b>	<b>☐ EVIDENCES AND FACTORS OF CLIMATE CHANGE : THE NATURE-MAN DICHOTOMY</b>	<b>26-36</b>
<b>Unit - 4</b>	<b>☐ GREEN HOUSE GASES AND GLOBAL WARMING</b>	<b>37-41</b>
<b>Unit - 5</b>	<b>☐ GLOBAL CLIMATIC ASSESMENT : IPCC REPORTS</b>	<b>42-52</b>

## **MODULE - 2**

<b>Unit - 6</b>	<b>☐ CLIMATE CHANGE AND VULNERABILITY : PHYSICAL, ECONOMIC AND SOCIAL</b>	<b>55-63</b>
<b>Unit - 7</b>	<b>☐ IMPACT OF CLIMATE CHANGE : AGRICULTURE AND WATER; FLORA AND FAUNA; HUMAN HEALTH AND MORBIDITY</b>	<b>64-99</b>
<b>Unit - 8</b>	<b>☐ GLOBAL INITIATIVES TO CLIMATE CHANGE MITIGATION-KYOTO PROTOCOL, CARBON TRADING, CLEAN DEVELOPMENT MECHANISM</b>	<b>100-135</b>
<b>Unit - 9</b>	<b>☐ NATIONAL ACTION PLAN (OF INDIA) ON CLIMATE CHANGE</b>	<b>136-146</b>
<b>Unit - 10</b>	<b>☐ ROLE OF LOCAL BODIES ON CLIMATE CHANGE MITIGATION-AWARENESS AND ACTION PROGRAMMES</b>	<b>147-154</b>



## Netaji Subhas Open University

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**Course : Disaster Management**

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Unit - 1	□ Definition and Concepts of Hazards and Disasters- Risk and Vulnerability; Classification of Hazards	7-23
Unit - 2	□ Causes and Consequences of Hazards : Physical, Economic and Cultural	24-34
Unit - 3	□ Role of National and International Organizations in Disaster Management	35-52
Unit - 4	□ Causes, Impact and Distribution of Earthquake, Tsunami, Landslides	53-77
Unit - 5	□ Causes, Impact and Distribution of : Flood and Drought	78-94
Unit - 6	□ Causes, Impact and Distribution of : Deforestation, Desertification, Salinization	95-115
Unit - 7	□ Response and Mitigation to Disasters: Institutional Set up, NDMA and NIDM	116-131
Unit - 8	□ Indigenous Knowledge and Community based Disaster Management: Do's and Don't's During and Post Disasters	132-148
Unit - 9	□ Emerging Approaches to Disaster Management: (a) Pre Disaster Stage, (b) Emergency Stage (c) Post Disaster Stage	149-160
Unit - 10	□ Regional Perspectives of Hazards in India with Reference to Dimension, Causes, Consequences and Remedial Measures : (A) Hills and (B) Coasts	161-219
Unit - 11	□ National and International Policies for Disaster Management	220-238
Unit - 12	□ Role of Geospatial Technologies (RS and GIS) in Disaster Management	239-251