

## Gg 210: Elements of Climatology and Oceanography (G2)

### Objectives:

1. To introduce the students to the basic principles and concepts in Climatology and Oceanography.
2. To acquaint the students with the applications of Climatology and Oceanography in different areas and environment.
3. To make the students aware of the Planet Earth and thereby to enrich the student's knowledge.

<b>Section I - Climatology</b>			
No.	Unit	Sub Units	Periods
1	Introduction to Climatology and Atmosphere	1. Definition, nature and scope 2. Importance of Climatology in modern times. 3. Weather and climate, elements of weather and climate 4. Composition and structure of the atmosphere	10
2	Insolation	1. Heat budget of the Earth. 2. Factors affecting horizontal distribution of temperature. 3. Inversion of temperature, lapse rate and its types. 4. Global warming.	8
3	Atmospheric Pressure and Wind System	1. Vertical and horizontal distribution of pressure. 2. Formation of pressure belts and their relation with winds. 3. Concept of pressure gradient. 4. Type of winds- planetary winds, periodic winds (Monsoon winds), local winds - land and sea breezes, mountain and valley winds. 5. El Niño and La Niña	10
4	Atmospheric Moisture and Precipitation	1. Sources of moisture, methods to express humidity of the air- absolute and relative humidity. 2. Forms of precipitation- rain, snow, dew, hail and fog. 3. Types of clouds- high, medium low clouds.	10
5	Atmospheric Disturbances	1. Cyclones- tropical and temperate and associated weather conditions. 2. Anticyclones and associated weather conditions.	7

<b>Section II – Oceanography</b>			
6	Oceanography	1. Definition, nature and scope. 2. Relevance of Oceanography on earth	8
7	Submarine Relief	1. General idea of ocean relief. 2. Relief of Atlantic, Pacific and Indian oceans.	8
8	Properties of Ocean Water	1. Properties of ocean water- temperature, density. 2. Salinity- meaning and causes. 3. Salinity of oceans, seas, and lakes with examples.	10
9	Movements of Ocean Water	1. Waves- Characteristics of sea waves, tsunamis. 2. Ocean currents- meaning, causes, types. 3. Ocean currents of Atlantic, Pacific and Indian Oceans 4. Effects of ocean currents. 5. Tides- meaning, causes, types. 6. Equilibrium theory of tides.	12
10	Coastal Environment	1. Significance of Coastal Environment. 2. Oceans as Storehouse of Resources for the future	7

### **Reference Books:**

Critchfield, H.J., 1997. General Climatology, Prentice Hall of India Pvt. Ltd, New Delhi.  
Dasgupta, A. and Kapoor, A.N., Principles of Physical Geography.  
Grald, S., General Oceanography.  
Ttrewartha, G., Introduction to Weather and Climate.  
King, C.A.M., Oceanography for Geographers.  
Lake, P., Physical Geography.  
Lutgens, F.K. and Tarbuck, E.J., 2007. The Atmosphere, Pearson Prentice Hall,  
Pirie, R.G., Oceanography (Contemporary).  
Ross, D.A., 1988. Introduction to Oceanography. Prentice Hall, New Jersey.  
Sharma, R.C. and Vatel. M.,- Oceanography for Geographers.  
Strahler, A.A. and Strahler, A. N., 2002. Physical Geography: Science and Systems of the Human Environment, John Wiley and Sons, INC.  
Strahler, A.H. and Strahler, A. N., 1992. Modern Physical Geography, John Wiley and Sons, Inc.  
Strahler, A.N., 1965. Introduction to Physical Geography, John Wiley and Sons, INC.  
Ahirrao, W.R., Alizad, S.S. and Dhapte, C.S., 1998. Climatology and Oceanography, Nirali Prakashan, Pune.  
Bhagvat Arvind and Karlekar Shrikant : Prakrutik Bhuvidnyan  
Datye and Datye : Sugam Prakrutik Bhuvidyan.

Various websites of internet.

## Gg-210 Geography of Disaster Management (G2)

### Objectives:-

- 1) To introduce students the concept of disaster & its relation with Geography.
- 2) To acquaint the students with the utility & application of hazards in different areas & its management.
- 3) To make the students aware of the need of protection & disaster management.

### SECTION - I

Sr. No.	Topic	Sub Topic	Learning Points	Periods
1	Introduction to hazards, disasters	Definition and types	a) Meaning, definition, b) Geographical conditions and disasters c) Classification of disasters	10
2	Basic concepts in disaster management.	Terminology and concepts	a) Concept of management b) Aims and objectives c) Pre-disaster management d) Post – disaster management	12
3.	Disaster management and measures	Structural and Non -structural measures	a) Structure of disaster management -Preparedness, Response, Recovery, Mitigation, Rehabilitation b) Standard operating procedure of management on government level c) Role of media	13
4	Climatic disasters and their management	causes, effects, area and management	a) Cyclones as disasters b) Droughts as disasters c) Floods as disasters	10

### SECTION – II

Sr. No.	Topic	Sub Topic	Learning Points	Periods
5	Geological and Geomorphic disasters and their management	Causes, effects, area and management	a) Earthquakes as disasters b) Landslides as disasters c) Tsunami as disasters	10
6	Anthropogenic disasters and their management	Trend, types, area, causes, effects and remedies.	a) Deforestation b) Forest fire as disasters c) Soil degradation d) Over exploitation of resources	12
7	Global issues and movements	Causes, effects and measures to conservation.	a) Global warming b) Ozone depletion c) Acid rain	10
8	Case Studies of disaster Managements	Management of Indian and Global disasters	a) Tsunami in Indian ocean -2004 b) Kedarnath Cloud Burst -2013 c) Fukushima Nuclear disaster -2011 d) Hail storm in Maharashtra- 2014	13

## Reference books:

1. Alexander David, 2000, Introduction in Confronting Catastrophe, Oxford University Press.
2. Alexander, D. (1993): Natural Disasters. UCL Press Ltd., London
3. Andharia J. 2008, Vulnerability in Disaster Discourse, JTCDM, Tata Institute of Social Sciences Working Paper no. 8.
4. Blakie, P. Cannon T, Davis I, Wisner B. 1997, At Risk Natural Hazards, People Vulnerability and Disasters Rourledge.
5. Bloom, A.L., 1998. Geomorphology. A Systematic Analysis of Late Cenozoic Landforms. Pearson Education (Singapore) Pte. Ltd.
6. Chandna, R. C., 2000. A Geography of Population, Concepts, Determinants and Patterns, Kalyani Publishers, New Delhi.
7. Copola P Damon, 2007, Introduction to International Disaster Management
8. Cuny, F. 1983, Development and Disaster, Oxford University Press.
9. Govt. of India, 2005, Disaster Management Act Government of India, New Delhi.
10. Hamblin, W.K., 1989. The Earth's Dynamic Systems, Macmillan Publishing Company, New York.
11. Huggett, D.A., 2004. Fundamentals of Biogeography, Routledge.
12. Kale, V.S. and Gupta, A., 2001. Introduction to Geomorphology, Orient Longman, Calcutta.
13. Knox, P. and Agnew J., 1998. The Geography of the World Economy, Arnold, London.
14. Lutgens, F.K. and Tarbuck, E.J., 2007. The Atmosphere. Prentice Hall, Englewood Cliffs, New Jersey, USA.
15. Ross, D. A., 1988. Introduction to Oceanography. Prentice Hall, New Jersey.
16. Saptarshi P. G., More J. C., Ugale V. R. (2009), "Geography and Natural Hazard" Diamond, Pune.
17. Savindra Singh, (2000): Environmental Geography. Prayag Pustak Bhavan, Allahabad
18. Singh, S., 1998. Geomorphology, Prayag Pustak Bhavan, Allahabad.
19. Strahler, A.A. and Strahler, A. N., 2002. Physical Geography: Science and Systems of the Human Environment, John Wiley and Sons, INC.
20. A.H.Choudhar ,P.N.Salve, S.M.Kadam.R.H.Choudhar,V.C.Ithape (2010), "Contemporary Issues and Geography",Atharva ,Pune.

## Gg- 220 : Tourism Geography (S-1)

### Objective:-

- 1) To acquaint the student's basic concepts of Geography & Tourism
- 2) To aware the students with the utility and application of Tourism
- 3) To help the students & society to understand the interrelationship between tourism and employment generation opportunities.
- 4) To understand the impact of tourism on Physical and Human Environments.

Section-I				
No.	Unit	Sub-unit	Learning Points	Periods
1	Introduction to Tourism Geography	(A) Introduction and Definition  (B) Nature of Tourism Geography  (C) Scope of Tourism Geography  (D) Importance	1.Introduction 2.Definition of Tourists and Tourism  1.Uniqueness    2. Diversity 3.Recreational    4. Dynamic 5.Interdisciplinary 6.Non-Productive 7.Seasonal  1 Tourism as a Basic Need of Mankind 2 Tourism and Transportation 3 Natural environment and Tourism 4. Culture and Tourism 5. Religion and Tourism 6. Tourism Products  1 Relation Between Geography and Tourism 2 Importance of Tourism	10
2	Concepts and Classification of Tourism	(A) Concepts  (B) Classification Based on a) Nationality  b) Travel Time  c) Travel Distance	1 Geo-Tourism 2 Agro- Tourism 3 Heritage Tourism 4 Adventure Tourism 5 Religious Tourism 6 Health Tourism 7 Sport Tourism 8 Disaster Tourism  1. International    2. National 3. Regional    4. Local  1. Long Haul    2. Short Haul.  1. Global    2. National 3. Regional    4. Local	15

		d) Number Of Tourists  e) Purpose  f) Approach	1. Groups      2. Family Members 3. Individual  1. Religious      2. Recreation 3. Heritage      4. Adventure 5. Nature      6. Health 7. Sports 1. Eco-tourism as an Approach	
3	Assessing Tourism Potentials -I	Physical Factors (A) Relief  (B) Water bodies  (C) Climatic  (D) Forest	1. Mountain      2. Plateau 3. Plain      4. Sea Beaches 5. River Source      6. Water Fall  1. Lakes/ Dams      2. Hot Spring 3. Natural gassers 4. River –Confluences  1. Hill Station      2. Snow Fall 3. Rainy Season      4. Sanatoriums  1. National Park      2. Sanctuaries (With Indian Examples )	10
4	Assessing Tourism Potentials -II	Socio- Cultural Factors (A) Religious (B) Historical (C) Socio-Cultural	Pilgrim – All Religious Centers Historical Monuments Culture, Festivals, Sports Centres, Warli Paintings, Ideal Village (With Indian Examples)	10
<b>Section -II</b>				
5	Transportation and Communication	Infrastructure and Support System	1. Road      2. Rail      3. Water 4. Air      5. Space  1. Guide 2. Telephone/ mobile/ TV 3. Internet 4. Electronic & Printing Media 5. Travel & Tourist Agencies	10
6	Accommodation	Accommodation Types	1 Private Hotels, motels, Inn 2 Govt. accommodation- Tourist home, Guest House, Rest house, Youth Hostel, Tents, Caravans and Bed & Breakfast 3. Rail Yatirbhavan 4. House boats 5. Dharmashala	10

7	Impact of Tourism	<p>(A) Environmental Impact</p> <p>(B) Economic Impacts</p> <p>(C) Social and Cultural Impact</p>	<p>1. Land Degradation 2. Pollution – Land, Water, Air 3. Loss of Plants 4. Loss of Wild Animals and Birds</p> <p>1. Tourism as an Economic Activity 2. Effect on foreign Exchange 3. Employment generation 4. Increase of Land Values 5. Increase of Trading Activity 6. Increase of Govt. Revenues 7. Growth of infrastructure development 8. Multiple effect</p> <p>1. New colonialism    2. Crime 3. Religion              4. Language 5. Health 6. Traditional Arts</p>	12
8.	Case Studies of Major Tourist Centers in India	<p>(A). Hill Station</p> <p>(B) Beach Point</p> <p>(C). Historical</p> <p>(D) Religious</p> <p>(E) Dams/ Lake</p>	<p>1. Manali 2. Mahabaleshwar</p> <p>1. Marina Beach (Chennai) 2. Diveagar (Raigadh)</p> <p>1. Konark Sun Temple (Orissa) 2. Raigadh Fort</p> <p>1. Vaishno Devi (Jammu) 2. Shegaon (Buldhana)</p> <p>1. Sardar Sarovar (Gujrat) 2. Lonar Lake (Buldhana)</p>	13

### References:-

1. Robinson H.(1996): A Geography of Tourism
2. Bhatia A.K., Sterling Publisher Ltd., New Delhi : Tourism Development, Principles and Practices
3. S.N. Singh (1985): Geography of Tourism and Recreation
4. Douglas Pearce (1987) Tourism Today : A Geographical Analysis :
5. Mathieson A. and Wall C, Logman, U.K : Tourism : Economic Physical and Social Impact :
6. Manoj Das India: A tourist Paradise
7. Maneet Kumar Tourism Today: An Indian Perspective
8. Hudman L.E. Geography of Travel and Tourism
9. Seth P.N (1985) Sterling Publisher Ltd., New Delhi Successful Tourism Management
10. Smith S.L.J : Tourism Analysis
11. Gupta V.K : Tourism of India
12. Kaul R.N, Sterline Publisher Ltd : Dynamics of Tourism
- 13..Shinde S.B, Phadke Prakashana Kolhapur 2: Geography of Tourism
14. Nagktode P.M., Prof. D.Pardhi. Vidya Prakashan Nagpur : Geography Tourism
15. Vitthal Gharpure., Pimplapure Publication Nagpur : Geography of Tourism.
16. Bhagwat A.V., Medha Joshi .: Murlidhar Publication Pune : Geography of Tourism.
17. Dixit N.K, Vista International Publication Delhi: Tourism Geography.

18. Sharma A. (2008) : Tourism Development, RBSA Publishers, Jaipur.
19. Thakur Meenakshi Thakur (2008) : Ecotourism and Sustainable Tourism, Omega Publications, New Delhi.
20. Gitanjali, Chaudhary, Gautam P.R., (2010): Tourism Geography, Centurian Press
21. Suryawanshi Rajendra (2012): Assessment of Potentials for Eco-tourism, Lambert Publication.



## **Gg-201 : FUNDAMENTALS OF GEOGRAPHICAL ANALYSIS**

From June 2014

Workload : Six periods per week per batch (12 Students Per Batch)  
(Examination for the Course will be conducted at the end of academic year)

### **Objectives:**

1. To enable the students to use various Projections and Cartographic Techniques.
2. To acquaint the students with basic of Statistical data.
3. To acquaint the students with the principles of surveying, its importance and utility in the geographical study.

### **SECTION- I**

<b>No</b>	<b>Topic</b>	<b>Learning Points</b>	<b>Exercises</b>	<b>No. of periods</b>
1	Maps and Scales	1. Maps : Meaning, definition and Types 2. Map Scale : Definition and Types	1. Map : Meaning, Definition and Types. 2. Map Scale : Definition and Types  Conversion of Verbal scale to numeric and vice-versa (in British and Metric Systems) i) Construction of simple graphical scale (Two examples) i) Construction of comparative scale (Two examples)	15
2	Map Projection	1. Definition and need of Map Projection 2. Classification of map projection based on method of construction and developable surfaces used.	1. Zenithal Polar projection. i. Zenithal Polar Gnomonic Projection ii. Zenithal Polar Stereographic Projection. 2. Conical Projection : i. Projection with one standard parallel ii. Bonne's Projection 3. Cylindrical Projection i. Cylindrical equal area Projection. ii. Mercator's Projection 4. Conventional Map Projections i. Mollweide's Projection (Construction of above map projection with properties and uses of each group : one example from each hemisphere).	20
3	Data Representation by various techniques	1. Graphs and Diagrams	1. Simple Line Graph 2. Polygraph 3. Simple Bar Diagram 4. Compound Bar Diagram 5. Pie Diagram (Chart) 6. Choropleth Mapping Plotting & Presentation using computers	15

4	Basic analysis of Statistical Data	1. Population and Sample 2. Statistical Data and Frequency	1. Population, sample, Method of sampling, Characteristics of sample 2. Tally marks and frequency table. 3. Frequency distribution (histogram and polygon) 4. Cumulative Frequency and Ogive curve.	10
---	------------------------------------	---	--	----

## SECTION II

5	Surveying	1. Directions 2. Definition of Surveying 3. Types of Surveying  4. Measurement of Land	1. Various Methods of deciding North direction True, Magnetic and Grid North  2. Plane Table Survey. i. Radiation Method      ii. Intersection methods 3. Prismatic Compass Surveying Methods: ii. Open Travers          ii. Close Travers  4. GPS Survey & Plotting Finding Latitude (X), Longitude (Y) and Altitude (Z). Plotting of X and Y on graph paper 5. Dumpy Level Survey Plotting by- i. Rise and Fall Method ii. Collimation Plane Method  6. At least exercise involving of actual measurement of piece of a land.	40
6	Field Excursion / Village/ Urban Survey	Visit two places of geographical interest anywhere in the country.	One short tour of two days duration and Preparation of tour report. OR One long tour more than five days and preparation of tour report	20

- Note :**
1. Use of stencils, log tables, computer and calculator is allowed.
  2. Journal should be completed and duly certified by practical in-charge and Head of the Department.
  3. Int. and Ext examiner should set jointly the question paper for each batch

### Reference Books :

1. Singh Leharaj, (1973) : Map Work and Practical Geography, Central Book Depot – Allahabad
2. D. Y. Ahirrao and E. K. Karanjkehele, (2002) : Pratyakshik Bhugol, Sudarshan – Nashik
3. P. G. Saptarshi and S. R. Jog, Statistical Methods
4. S. N. Karlekar, (2008) : Statistical Methods, Diamond – Pune
5. T. P. Kanetkar and S. V. Kulkarni, (1986) : Surveying and Leveling, Pune Vidyarthi Griha Prakashan – Pune
6. Arjun Kumbhare, Practical Geography
7. Pijushkanti Saha & Partha Basu. (2007), 'Advanced Practical Geography', Books and Allied (P) Ltd, Kolkata