

GEOGRAPHY

SAMPLE HANDOUT Introduction to Geography

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INTRODUCTION TO GEOGRAPHY

- The word 'geography' originates from two Greek words. The first is 'geo' which means 'the earth' and the second Greek word is "graph" which means 'to write').
- Therefore, Geography is the science that deals with the description of the Earth's surface. Geography is a multi disciplinary fields that studies spatial patterns and phenomenon.
- The first recorded use of the word geography was by Eratosthenes, a Greek scholar is credited with creating the discipline of geography.
- Geography is the science of place and space. Geographers ask where things are located on the surface of the earth, why they are located where they are, how places differ from one another, and how people interact with the environment.
- Geography is unique in linking the social sciences and natural sciences together.
- Geographers also study the relationships between human activity and natural systems. There are two main branches of geography: human geography and physical geography.
- Human geography is concerned with the spatial aspects of human existence. Physical geographers study patterns of climates, land forms, vegetation, soils, and water.
- Physical geography
- This branch focuses on Geography as an Earth science. It studies processes and patterns in the natural environment ranging from the oceans to physical land to the atmosphere.
- Physical Geography studies the all processes and pattern that can be consider natural on the Earth's surface.
- It makes use of biology to understand global flora and fauna patterns, and mathematics and physics to understand the motion of the Earth and relationship with other bodies in the solar system. It also includes environmental geography.

Biogeography

Animals and plants on Earth are usually distributed in specific patterns and biography is the discipline that is involved in this study. Biogeography studies the distribution of biological species and the geographic patterns that are a result.

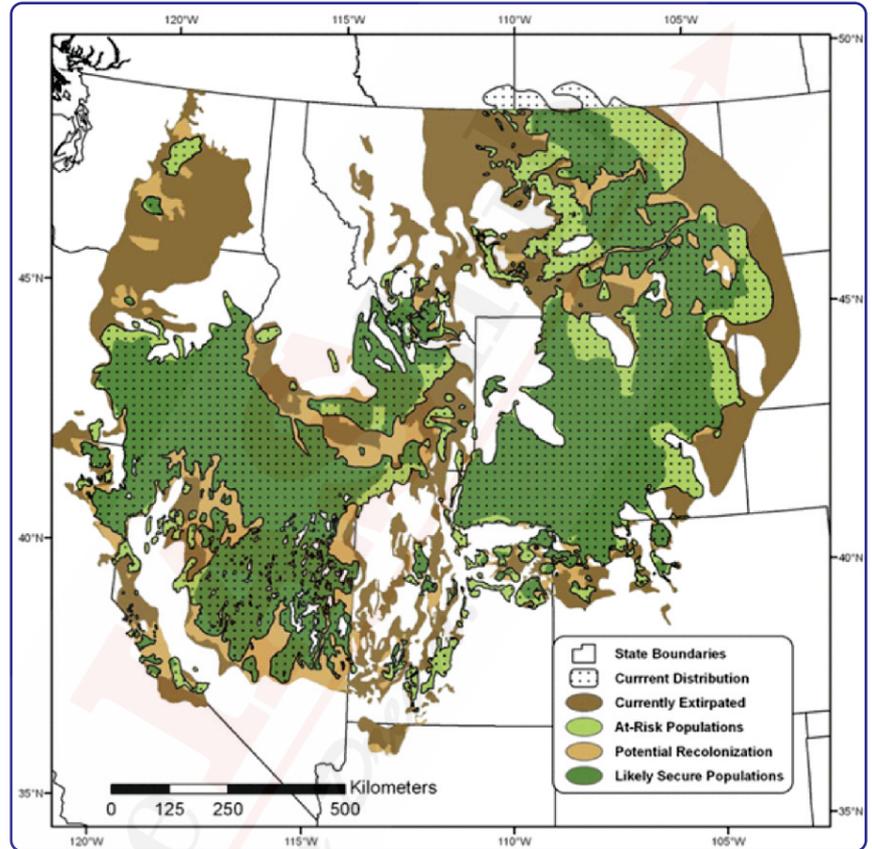
Biogeographers use GIS to predict greater sage-grouse distribution in the American West.

Subtopics:

- Genesis of soils
- Classification and distribution of soils
- Factors influencing world distribution of plants and animals

Climatology

- Geographers in this branch of geography are usually concerned with the investigation of the weather patterns of the Earth and the way in which they affect the climate as a result.
- Activities that are taking place within the atmosphere of the Earth are also studied in this discipline.



A weather station

Climatologists study the climate as it is made up by weather conditions throughout history. This area of study can involve local climate science as well as global, or macro, climate changes.

Subtopics:

- Temperature and pressure belts of the world
- Monsoons and jet streams
- Air masses and frontogenesis



Environmental Geography

Environmental geography focuses on studying the interactions and impacts between humans and the natural world.

Environmental geography links aspects of human geography with physical geography.

A forest being cleared for cattle grazing in Florida

Subtopics:

- Ecosystem their management and conservation
- Environmental degradation, management and conservation
- Biodiversity and sustainable development

Geomorphology

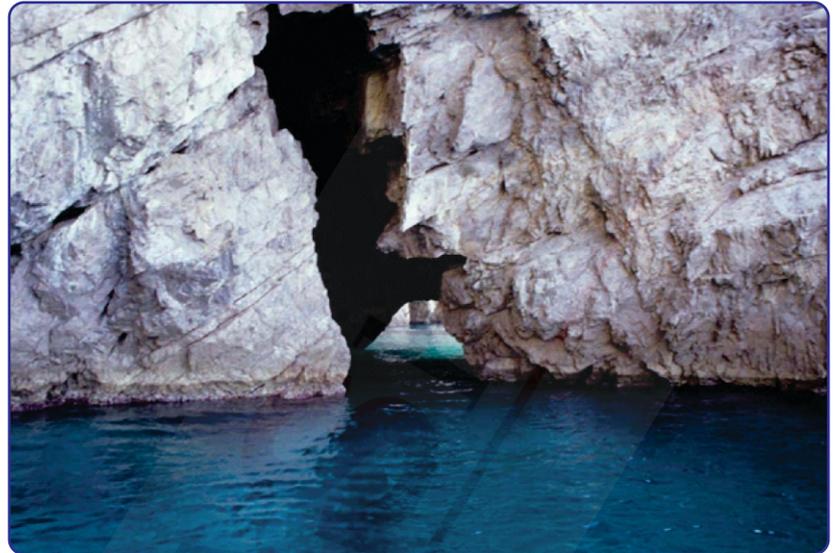
- Geomorphology is the study of Earth's landforms, terrain, and the processes that guide these changes. The landforms on Earth usually develop in interesting ways, stemming from tectonic movement and climatic influences. There are numerous processes that normally lead to the eventual vanishing of these landforms.
- For instance, erosion is a major part of this field, as it has been discovered to be a major factor that influences the disappearance of landforms.
- Geomorphology seeks to understand past landforms and what happened to them in order to make predictions about the future through field observations, physical experiments, and modeling.



A sandstone formation in the Valley of Fire Nevada State Park caused by erosion

Subtopics:

- Physical conditions of the earth's interior
- Continental drift
- Plate tectonics
- Volcanism, Earthquakes



Oceanography

- The study of the world's oceans and seas is known as oceanography. Oceanographers study marine biology and organisms, currents, waves, and the movement of water, as well as the physical makeup of sea floors.
- Oceanographers seek to blend these complex areas of study into the field for a comprehensive view of the world's oceans.

An ocean cave on the coast of Capri Island, Italy

Subtopics:

- Waves, currents and tides
- Marine resources: biotic, mineral and energy resources
- Coral reefs, coral bleaching

Human geography

- The human, or political/cultural, branch of geography – also called anthropogeography focuses on the social science, non-physical aspects of the way the world is arranged.
- It examines how humans adapt themselves to the land and to other people, and in macroscopic transformations they enact on the world.
- It can be divided into the following broad categories: economic geography, political geography, social geography.

Economic Geography

- Economic Geography is the study of the spatial variation of human economic activities – production, consumption, and exchange, with emphasis on resource endowments, international trade and commerce, population growth, settlements, development, interaction and interdependencies, and regional supply and demand.

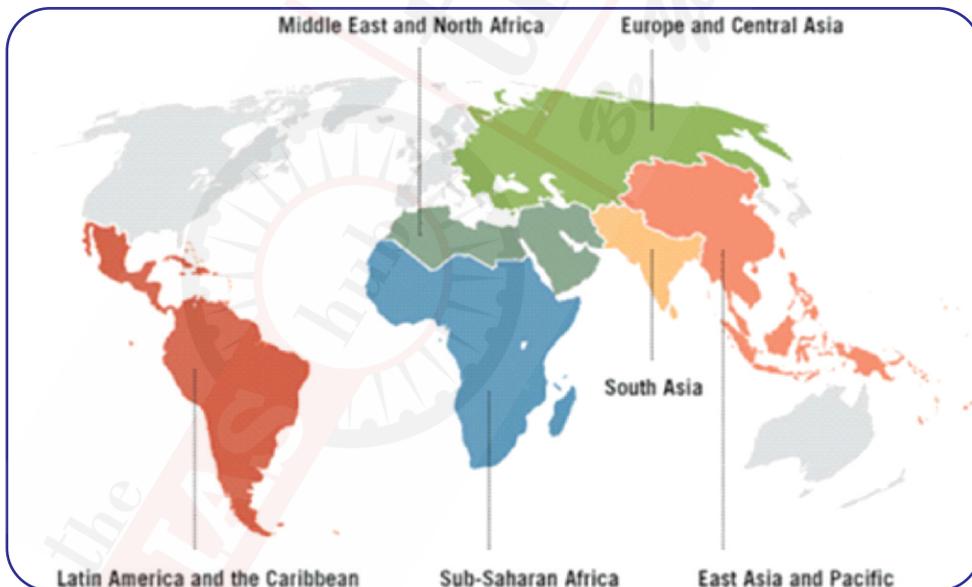


Subtopics:

- World economic development: measurement and problems
- World resources and their distribution
- World industries: locational patterns and problems

Regional geography

Regional geography is a field of study which strongly contrasts with systematic geography. While the latter is concerned with the distribution of certain characteristics, such as landforms, climate, vegetation, and human activities, over the surface of the earth, regional geography looks into the relationships these phenomena have within the different regions.

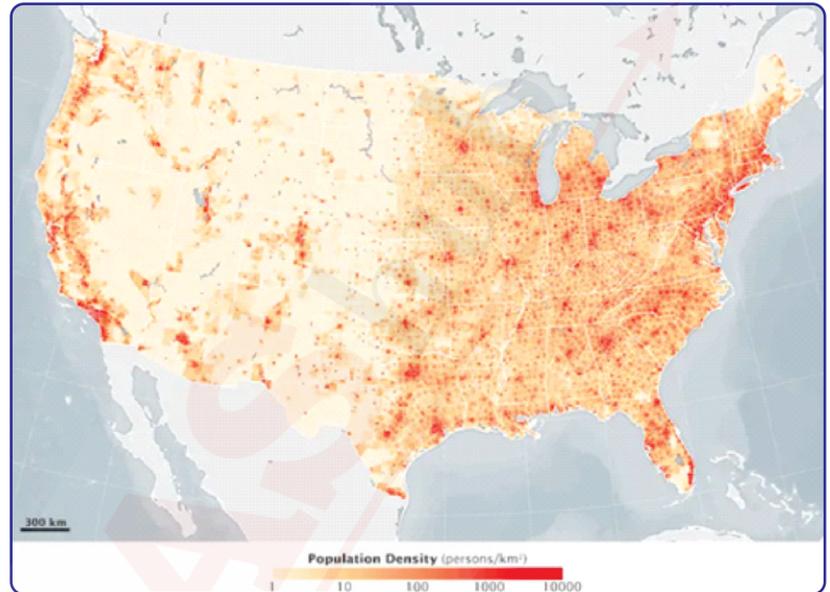


Subtopics:

- Concept of a region
- regional development strategies
- environmental issues in regional planning
- Planning for sustainable development

Population Geography

- In most cases, scholars usually equate population geography to demography even though this is usually not the case. This is mainly owing to the reason that population geography is deeper than the study of the patterns of a group of people with regards to birth, marriage & death as is the case with demography.
- Geographers who are involved in this discipline normally study the population of regions in much more detail.
- This means that they normally look at the manner in which the population of a given area is distributed, how the people there migrate, and the rate as well as pattern of the population growth.



Population density of the United States, 2015

Subtopics:

- Growth and distribution of world population
- Demographic attributes
- Causes and consequences of migration
- world population problems

Settlement Geography

- Settlement geography, which includes urban geography, is the study over time and space of areas where humans have or currently reside.

A view of a suburban subdivision being developed in Atlanta, Georgia, USA

Subtopics:

- Types and patterns of rural settlements
- Problems and remedies of urbanization
- Sustainable development of cities

Geographic Techniques

- Many technologies and techniques have evolved to help geographers in their study of the Earth.



- Geographic information systems and remote sensing are two main areas of geographic study that focus on using geospatial technologies to map out and analyze the world.
- GPS, LiDAR and satellite data are the main technologies being used to collect data about the Earth.

Syllabus:

PRELIMINARY EXAMINATION:

Paper I - (200 marks) Duration: Two hours

1. Indian and World Geography-Physical, Social, Economic Geography of India and the World.
2. General issues on Environmental ecology, Bio-diversity and Climate Change - that do not require subject specialization.

MAIN EXAMINATION:

PAPER-II -General Studies-I: Indian Heritage and Culture, History and Geography of the World and Society.

1. Salient features of world's physical geography.
2. Distribution of key natural resources across the world (including South Asia and the Indian sub-continent); factors responsible for the location of primary, secondary, and tertiary sector industries in various parts of the world (including India).
3. Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc., geographical features and their location-changes in critical geographical features (including water-bodies and ice-caps) and in flora and fauna and the effects of such changes.

MAINS GEOGRAPHY QUESTIONS:

2020

1. Discuss the geophysical characteristics of Circum- Pacific Zone. (Answer in 150 words) 10
2. The process of desertification does not have climate boundaries. Justify with examples. (Answer in 150 words) 10
3. How will the melting of Himalayan glaciers have a far- reaching impact on the water resources of India? (Answer in 150 words) 10
4. Account for the present location of iron and steel industries away from the source of raw material, by giving examples. (Answer in 150 words) 10
5. The interlinking of revivers can provide viable solutions to the multi-dimensional inter-related problems of droughts, floods and interrupted navigation. Critically examine. (Answer in 250 words) 15
6. Account for the huge flooding of million cities in India including the smart ones like Hyderabad and Pune. Suggest lasting remedial measures. (Answer in 250 words) 15

7. India has immense potential of solar energy though there are regional variations in its developments. Elaborate. (Answer in 250 words) 15
8. Examine the status of forest resources of India and its resultant impact on climate change. (Answer in 250 words) 15

2021

1. Differentiate the causes of landslides in the Himalayan region and Western Ghats. (Answer in 150 words) 10
2. Despite India being one of the countries of the Gondwanaland, its mining industry contributes much less to its Gross Domestic Product (GDP) in percentage. Discuss. (Answer in 150 words) 10
3. What are the environmental implications of the reclamation of water bodies into urban land use? Explain with examples. (Answer in 150 words) 10
4. Mention the global occurrence of volcanic eruptions in 2021 and their impact on regional environment. (Answer in 150 words) 10
5. Why is India considered as a subcontinent? Elaborate your answer. (Answer in 150 words) 10
6. Briefly mention the alignment of major mountain ranges of the world and explain their impact on local weather conditions, with examples. (Answer in 250 words) 15
7. How do the melting of the Arctic ice and glaciers of the Antarctic differently affect the weather patterns and human activities on the Earth? Explain. (Answer in 250 words) 15
8. Discuss the multi-dimensional implications of uneven distribution of mineral oil in the world. (Answer in 250 words) 15