

1. Details of Module and its structure

Module Detail	
Subject Name	Geography
Course Name	Geography 01 (Class XI, Semester - 1)
Module Name/Title	Geography as a Discipline – Part 1
Module Id	kegy_10101
Pre-requisites	Basic knowledge about nature of geography as a subject
Objectives	After going through this Module, the learners will be able to : <ul style="list-style-type: none">• Explain the concept of Geography and appreciate the use of Geography in daily life.• Describe the development of Geography as a discipline• Discuss the man-environment relationships and their impacts on each other
Keywords	Areal differentiation, Geographical phenomena, Man-nature relationship, Integrating discipline

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Introduction

Geography is studied as one of the components of the Social Science course up to the secondary level of learning. This makes us aware of some of the phenomena of geographical nature in the world and its different parts. Now, you will study ‘Geography’ as an independent subject and learn about the physical environment of the earth, human activities and their interactive relationships. We study geography to know about earth, sun, moon, continents and oceans, wind and water cycles etc. and also to know the physical locations and placements of territories on maps and help students identify distances and spatial relationship of the land and environmental interrelationships. We live on the surface of the earth. Our lives are affected by our surroundings in many ways. We depend on the resources of the surrounding areas to sustain ourselves. Primitive societies subsisted on ‘natural means of subsistence’, i.e. edible plants and animals. With the passage of time, we developed technologies and started producing our food using natural resources such as land, soil and water. We adjusted our food habits and clothing according to the prevailing weather conditions. There are variations in the natural resource base, technological development, adaptation with and modification of physical environment, social organisations and cultural development.

As a student of geography, you should be curious to know about all the phenomena which vary over space. You learn about the diverse lands and people. You should also be interested in understanding the changes which have taken place over time. Geography equips you to appreciate diversity and investigate into the causes responsible for creating such variations over time and space. You will develop skills to understand the globe converted into maps and have a visual sense of the earth’s surface. The understanding and the skills obtained in modern scientific techniques such as GIS and *computer cartography* equip you to meaningfully contribute to the national endeavour for development.

The earth is our home. It is also the home of many other creatures, big and small, which live on the earth and sustain. The earth's surface is not uniform. It has variations in its physical features. There are mountains, hills, valleys, plains, plateaus, oceans, lakes, deserts and wilderness. There are variations in its social and cultural features too. There are villages, cities, roads, railways, ports, markets and many other elements created by human beings across the entire period of their cultural development.

This variation provides a clue to the understanding of the relationship between the physical environment and social/cultural features. The physical environment has provided the stage, on which human societies enacted the drama of their creative skills with the tools and techniques which they invented and evolved in the process of their cultural development.

Geography is the description of the earth. The term geography was first coined by **Eratosthenese**, a Greek scholar (276-194 BC.).



Figure No; 01-Eratosthenese

Source:- <https://upload.wikimedia.org/wikipedia/commons/b/b3/Eratosthene.01.pn>

The word has been derived from two roots from Greek language geo (earth) and graphos (description). Put together, they mean description of the earth. The earth has always been seen as the abode of human beings and thus, scholars defined geography as, “the description of the earth as the abode of human beings”. You are aware of the fact that reality is always multifaceted and the ‘earth’ is also multi-dimensional, that is why many disciplines from natural sciences such as geology, pedology, oceanography, botany, zoology and meteorology and a number of sister disciplines in social sciences such as economics, history, sociology, political science, anthropology, and others study different aspects of the earth's surface. Geography is different from other sciences in its subject matter and methodology but at the same time, it is closely related to other disciplines. Geography derives its data base from all the natural and social sciences and attempts their synthesis.

Geography as the study of areal differentiation

We have noted that there exist variations over the surface of the earth in its physical as well as cultural environment. A number of phenomena are similar and many are dissimilar. It was, therefore, logical to perceive geography as the study of *areal differentiation*. Thus, geography was perceived to study all those phenomena which vary over space. Richard Hartshorne has defined geography as the description and explanation of the areal differentiation of the earth's surface while Hettner said that geography studies the differences of phenomena usually related in different parts of the earth's surface.

Geographers do not study only the variations in the phenomena over the earth's surface (space) but also study the associations with the other factors which cause these variations. For example, cropping patterns differ from region to region but this variation in cropping pattern, as a phenomenon, is related to variations in soils, climates, demands in the market, capacity of the farmer to invest and technological inputs available to her/him. Thus, the concern of geography is to find out the causal relationship between any two phenomena or between more than one phenomenon.

A geographer explains the phenomena in a frame of cause and effect relationship, as it does not only help in interpretation but also foresees the phenomena in future.

The geographical phenomena, both the physical and human, are not static but highly dynamic. They change over time as a result of the interactive processes between ever changing earth and untiring and ever-active human beings. Primitive human societies were directly dependent on their immediate environment. Geography, thus, is concerned with the study of Nature and Human interactions as an integrated whole. 'Human' is an integral part of 'nature' and 'nature' has the imprints of 'human'. 'Nature' has influenced different aspects of human life. Its imprints can be noticed on food, clothing, shelter and occupation. Human beings have come to terms with nature through adaptation and modification. As you already know, the present society has passed the stage of primitive societies that were directly dependent on their immediate physical environment for sustenance. Present societies have modified their natural environment by inventing and using technology and thus, have expanded the horizon of their operation by appropriating and utilising the resources provided by nature. With the gradual development of technology, human beings were able to loosen

the shackles of their physical environment. Technology helped in reducing the harshness of labour, increased labour efficiency and provided leisure to human beings to attend to the higher needs of life. It also increased the scale of production and the mobility of labour.

The interaction between the physical environment and human beings has been very succinctly described by a poet in the following dialogue between 'human' and 'nature' (God). "***You created the soil, I created the cup, you created night, I created the lamp. You created wilderness, hilly terrains and deserts; I created flower beds and gardens***". Human beings have claimed their contribution using natural resources. With the help of technology, human beings moved from the stage of necessity to a stage of freedom. They have put their imprints everywhere and created new possibilities in collaboration with nature. Thus, we now find humanised nature and naturalised human beings and geography studies this interactive relationship amongst human and nature. The space got organised with the help of the means of transportation and communication network. The links (routes) and nodes (settlements of all types and hierarchies) integrated the space and gradually, it got organised. As a social science discipline, geography studies the 'spatial organisation' and 'spatial integration'.

Geography as a discipline is concerned with the following three sets of questions. These are:

- (i) Some questions are related to the identification of the patterns of natural and cultural features as found over the surface of the earth. These are the questions about *what?*
- (ii) Some questions are related to the distribution of the natural and human/ cultural features over the surface of the earth. These are the questions about *where?*

Taken together, both these questions take care of distributional and locational aspects of the natural and cultural features. These questions provided inventorised information of what features, and where located. It was a very popular approach during the colonial period. These two questions did not make geography a scientific discipline till the third question was added.

- (iii) The third question is related to the explanation or the causal relationships between features and the processes and phenomena. This aspect of geography is related to the question, *why?*

Geography as a discipline is related to space and takes note of spatial characteristics and attributes. It studies the patterns of distribution, location and concentration of phenomena over space and interprets them to provide explanations for these patterns. It also takes note of

the associations and inter-relationships between the phenomena resulting from the dynamic interaction between human beings and their physical environment.

Geography as Discipline

Geography is a discipline of synthesis. It attempts spatial synthesis, and history attempts temporal synthesis. Its approach is holistic in nature. It recognises the fact that the world is a system of interdependencies. The present world is being perceived as a global village. The distances have been reduced by better means of transportation increasing accessibility. The audio-visual media and information technology have enriched the database. Technology has provided better chances of monitoring natural phenomena as well as the economic and social parameters. Geography as an integrating discipline has interface with numerous natural and social sciences. All the sciences, whether natural or social, have one basic objective i.e. of understanding the reality. Geography attempts to comprehend the associations of phenomena as related in sections of reality.

Every discipline, concerned with scientific knowledge is linked with geography as many of their elements vary over space. Geography helps in understanding the reality in totality in its spatial perspective. Geography, thus, not only takes note of the differences in the phenomena from place to place but integrates them holistically that may be different at other places. A geographer is required to have a broad understanding of all the related fields, to be able to logically integrate them. This integration can be understood with some examples. Geography influences historical events. Spatial distance itself has been a very potent factor to alter the course of history of the world. Spatial depth has provided defence to many countries, particularly in the last century. In traditional warfare, countries with large size in area, gain time at the cost of space. The defence provided by oceanic expanse around the countries of the new world has protected them from wars being imposed on their soil. If we look at the historical events world over, each one of them can be interpreted geographically.

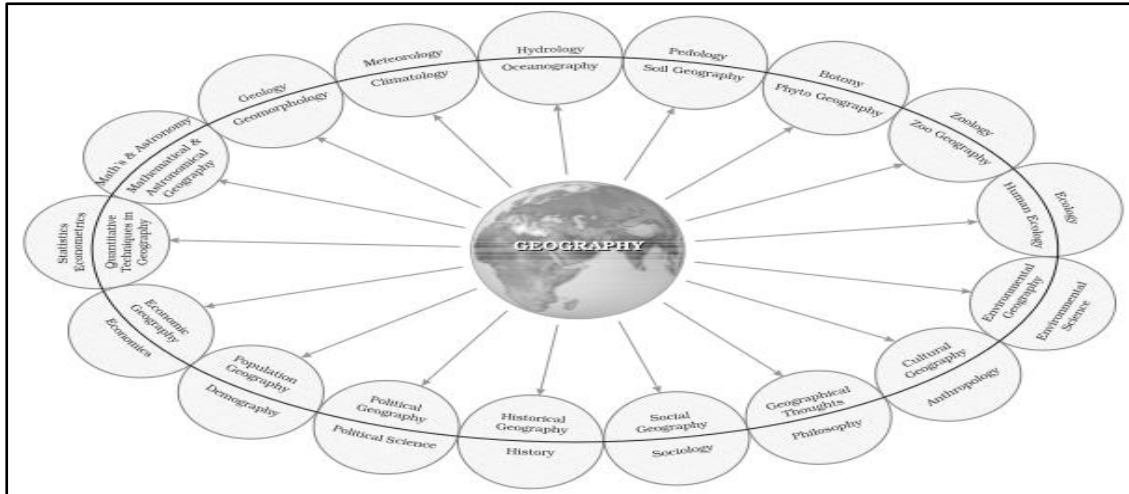


Figure 02: Geography and its relation with other subjects

In India, Himalayas have acted as great barriers and provided protection but the passes provided routes to the migrants and invaders from Central Asia. The sea coast has encouraged contact with people from East and Southeast Asia, Europe and Africa. Navigation technology helped European countries to colonise a number of countries of Asia and Africa, including India as they got accessibility through oceans. The geographical factors have modified the course of history in different parts of the world.

Every geographical phenomenon undergoes change through time and can be explained temporally. The changes in landforms, climate, vegetation, economic activities occupations and cultural developments have followed a definite historical course. Many geographical features result from the decision making process by different institutions at a particular point of time. It is possible to convert time in terms of space and space in terms of time. For example, it can be said that place A is 1,500 km from place B or alternately, it can also be said that place A is two hours away (if one travels by plane) or seventeen hours away (if one travels by a fast moving train). It is for this reason; time is an integral part of geographical studies as the fourth dimension.

Relationship between physical geography and natural sciences

All the branches of physical geography have interface with natural sciences. The traditional physical geography is linked with geology, meteorology, hydrology and pedology, and thus, geomorphology, climatology, oceanography and soil geography respectively have very close link with the natural sciences as these derive their data from these sciences. Bio-Geography is closely related to botany, zoology as well as ecology as human beings are located in different

locational niche. Therefore, plant geography, environmental geography and zoo geography are studied as a result of interactions between geography and biosciences.

Geography is also very much linked with the study of astronomical locations and deals with latitudes and longitudes. The shape of the earth is Geoid but the basic tool of a geographer is a map which is two dimensional representation of the earth. The problem of converting geoids into two dimensions has been tackled by projections constructed graphically or mathematically. Thus, a geographer should have some proficiency in mathematics and art, particularly in drawing maps. The cartographic and quantitative techniques require sufficient proficiency in mathematics, statistics and econometrics. Maps are prepared through artistic imagination. Making sketches, mental maps and cartographic work require proficiency in arts.

Relationship of geography with social sciences

Each social science has interface with one branch of geography .Every discipline has a philosophy which is the *raison d'etre* for that discipline. Philosophy provides roots to a discipline and in the process of its evolution, it also experiences distinct historical processes. Thus, the history of geographical thought as mother branch of geography is included universally in its curricula.All the Social Science disciplines such as Sociology, Political Science, Economics and Demography study different aspects of social reality. The branches of geography such as social geography, political geography, economic geography, and population and settlement geography are closely linked with these disciplines as each one of them has spatial attributes. Each social science has interface with one branch of geography.

History: The relationships between geography and history are so intricate that once a Greek scholar Herodotus said, “**all history must be treated geographically and all geography must be treated historically.**” Geography provides the stage for events to occur and these events are studied in history. This interaction between history and geography leads to historical geography. Geography influences historical events. Spatial distance itself has been a very potent factor to alter the course of history of the world. Spatial depth has provided defence to many countries, particularly in the last century. In traditional warfare, countries with large size in area, gain time at the cost of space. The defence provided by oceanic expanse around the countries of the new world has protected them from wars being imposed on their soil. If we look at the historical events world over, each one of them can be

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Political Science: The core concern of political science is territory, people and sovereignty which in turn depend on various geographical factors. This developed the concepts of 'Geopolitics' and political geography in the literature of geography. Consequently, the interaction between political science and geography took place. Political geography is interested in the study of the state as a spatial unit as well as people and their political behaviour. Similarly, administrative aspects in various spatial segments find interacting relationship with the public administration.

Sociology: The main concern of sociology is the systematic study of society and human social actions. This socio-cultural environment is one of the important segments in geography. Thus, interaction between sociology and geography has led to the development of Social Geography.

Anthropology: Anthropology is the study of human existence on the earth. It also provides a holistic account of humans and human nature in a particular region. This interaction in geography has led to Cultural Geography, Moral Geography that studies social phenomena and its segments in spatial perspective.

Economics: Economics concentrates mainly upon the human activities related to earning of their livelihood. It deals with basic attributes of the economy such as production, distribution, exchange and consumption. Each of these attributes also has spatial aspects and here comes the role of economic geography to study the spatial aspects of production, distribution, exchange and consumption. Since the nature of geography is anthropocentric, it studies the human aspects in great detail out of which economic aspects needs utmost attention as it determines the level of development in an area.

Summary

The above discussion shows that geography has strong interface with natural and social sciences. It follows its own methodology of study that makes it distinct from others. It has osmotic relationship with other disciplines. While all the disciplines have their own individual scope, this individuality does not obstruct the flow of information as in case of all cells in the body that have individual identity separated by membranes but the flow of blood is not obstructed. Geographers use data obtained from sister disciplines and attempt synthesis over space. Maps are very effective tools of geographers in which the tabular data is converted into visual form to bring out the spatial pattern. Thus, assemblage of different phenomena in different locations requires an understanding of geography and the concerned phenomena in a logical manner which leads to an inter-disciplinary approach for the study of geography. Hence, relationship of geography with other natural and social sciences is an important aspect of knowledge.