Unit 1

THE SCIENCE OF GEOGRAPHY

Unit Outcomes

At the end of this unit, you will be able to:

- understand the meaning and basic concept of geography;
- realize the scope of geography and its relationship with other disciplines;
- discuss different approaches of geographic studies;
- realize major schools of thought in geography.

Main Contents

INTRODUCTION

We hope that you remember what you have learned in your previous geography classes. The major topics treated in Grade Ten were the physical characteristics, human backgrounds and economic activities of the world and Ethiopia.

In this grade level, you are going to learn about the geography of Africa. Hence, the topics to be discussed are the physical, social, cultural, economic and political aspects of Africa.

Before we continue studying the socio-economic and political conditions of Africa, you will be acquainted with some basic concepts regarding the nature of geography as a disciplines.

1.1 THE MEANING OF GEOGRAPHY

At the end of this section, you will be able to:

- state the meaning of geography.

Key Terms

- Geography
- Science
- Spatial
- Phenomena
- Interdependence

Brainstorming

1. What is Geography?
2. Is Geography a science?
3. What do we mean by "science"?

Before we define what geography is, it is important to define what science is and to decide whether geography is a science or not.

Science is defined as a body of knowledge that is systematized, organized, experimented and verified. Geography has almost all these characteristics. Hence, it is a science.

Most people think that geography is only a study of certain physical features such as place names, lengths of rivers, heights of mountains, names of countries, and capital cities of countries. Others think that geography studies the physical earth. However, it is much more.

In Grade Nine, you learned about several definitions of geography proposed by different scholars. They enlightened you as to the nature of geography. Ancient Greeks defined geography for the first time. They combined two words:

- *Geo – which means earth*
- *Graphic – which means writing*

Therefore, their definition of geography was *a description of the earth*. Now this definition seems very general when we compare it to the scope of current geography.

Some of the definitions were made by scholars of the nineteenth and twentieth century. These definitions relate to geography's current concerns, interests and focus:

Geography is:

- *"a synthesizing discipline to connect the general with the particular through measurement, mapping, and a regional emphasis." (Alexander von Humboldt, 1845)*
- *"nothing less than an understanding of the vast interacting system between human beings and their environment on the earth's surface." (E.A Acreman, 1953)*
- *«a science that is meant to provide accurate, orderly, and rational description and interpretation of the variable character of the earth's surface.» (Richard Hartshorne, 1959)*
- *"a science concerned with the rational development and testing of theories that explain and predict the spatial distribution and location of various characteristics on the surface of the earth." (M. Yeates, 1968)*
- *"concerned with the locational or spatial variation in both physical and human phenomena at the earth's surface". (Martin Kenzer, 1989)*
- *"the study of the patterns and processes of human-built and environmental (natural) landscapes, where the landscapes comprise real (objective) and perceived (subjective) space." (Gregg Wassmansdorf, 1995)*
- *"the study of the environment of the earth's surface and the relationship of humans to this environment, which includes both physical and cultural geographic features." (Microsoft ® Encarta ® 2008)*

Brain-Storming

1 What do you understand from the above definitions?

2 Do you see any differences or similarities? Discuss these issues in your group.

As can be seen from the above definitions, geography does not have a single definition that is universally accepted. Nonetheless, most of the above definitions emphasize the fact that geography is a spatial science. Thus, it is possible to synthesize the given definitions and come up with a commonly acceptable definition. Accordingly, geography can be defined as "*the study of the spatial distribution of both physical and human-made things and phenomena on the earth's surface and the two-way interactions and interdependences between natural and human environments.*"

Therefore, geography is the study of:

- *The physical world, its inhabitants, and the interaction between the two; The resultant patterns and systems of geographical phenomena;*
- *Patterns and processes associated with causes;*
- *Relationships between humans and their environment, with emphasis on spatial perspectives at varying scales.*

Focus

In its modern context, *spatial perspective* is concerned with "where" and "why there" questions investigating the forces behind the causes and the patterns manifested as a result.

While making spatial investigations, geographers ask five pertinent questions about the phenomena they study. These are:

- *"WHERE are things located?"*
- *"WHY are they located where they are?"*
- *"WHEN did the things form?"*
- *"WHAT things are found where?" and*
- *"HOW are they arranged?"*

Activity 1.1

In a small group, discuss what the "where", "why there" and "how are they arranged" questions deal with. Present your results to the class.

The answers to these basic questions are both descriptive and analytical. Answers to the "where" questions are primarily descriptive in nature as they try to describe the places where things and phenomena are found.

Similarly, answers to the "why there" question try to provide logical explanations as to what factors determine the location of the phenomena in the places where they are found.

On the other hand, the "How are they arranged" question is primarily analytical. The answer provides visual explanations of how the studied phenomena are spatially distributed.

Geography tries to provide explanations about our world and the ways in which we live, work, and carry on socio-economic, political, and cultural activities. In short, geography is a science that investigates our cultural and natural environments, how we affect them, and how they affect us.

Consequently, it becomes important to note that geography is not only a study of place names, lengths of rivers, heights of mountains, areas of lakes, capital cities of countries and the like. It is much more than this. Geographer William Hughes proves it by stating the following:

Mere names of places... are not geography... knowing by heart a whole gazetteer full of them would not, in itself, constitute anyone a geographer. Geography has higher aims than this: it seeks to classify phenomena (alike of the natural and of the political world, in so far as it treats of the latter), to compare, to generalize, to ascend from effects to causes, and, in doing so, to trace out the great laws of nature and to mark their influences upon humans. This is 'a description of the world'-that is Geography. In a word Geography is a Science-a thing not of mere names but of argument and reason, of cause and effect.

William Hughes 1863

Geography is a systematic observation and study of the world in spatial perspective. It contributes a lot to the understanding of our complex and fast changing world. By doing so, it helps us appreciate the great diversity and complexity of peoples and places and the existing two-way relationships between them.

Content Check

1. Compare and contrast the definitions of geography given by different scholars.
2. Can you justify why the definition which we presented as the collective agreement is appropriate and why it is widely accepted?
3. What differentiates ancient and modern definitions of geography?

1.2 THE SCOPE OF GEOGRAPHY

At the end of this section, you will be able to:

- determine the scope of geography.

Key Terms

- Scope
- Geosphere
- Spatial interaction
- Spatial distribution

Brainstorming

1. Do you remember what you learned in Grade Nine about the scope of geography?
2. What is scope by itself? Please, try to remember.

As you might remember, scope refers to the extent of interest or focus in a certain subject. In other words, it refers to the capacity and limits that an academic discipline treats. In this regard, geography is said to have a greater scope than mere locations. It treats a wide range of phenomena on the planet earth. Generally,

the geo-sphere is considered as geography's scope. The geo-sphere itself is made up of five sub spheres, namely the lithosphere, hydrosphere, atmosphere (troposphere), biosphere and anthroposphere. Do you know what each of these spheres represents? If yes, good! Otherwise, please refer to Table 1.1.

Table 1.1: **The geospheres of the earth**

Geospheres	Description	Geography's related area of study
Lithosphere	The solid part- i.e., the rock layers of the earth	Geomorphology, soil geography
Troposphere	The lower part of the atmosphere where weather changes occur	Climatology
Hydrosphere	The water surfaces of the earth including oceans, seas and lakes	Oceanography
Biosphere	The part of the earth that supports all sorts of life	Biogeography
Anthroposphere	The earth's cultural landscape	Cultural geography, population geography

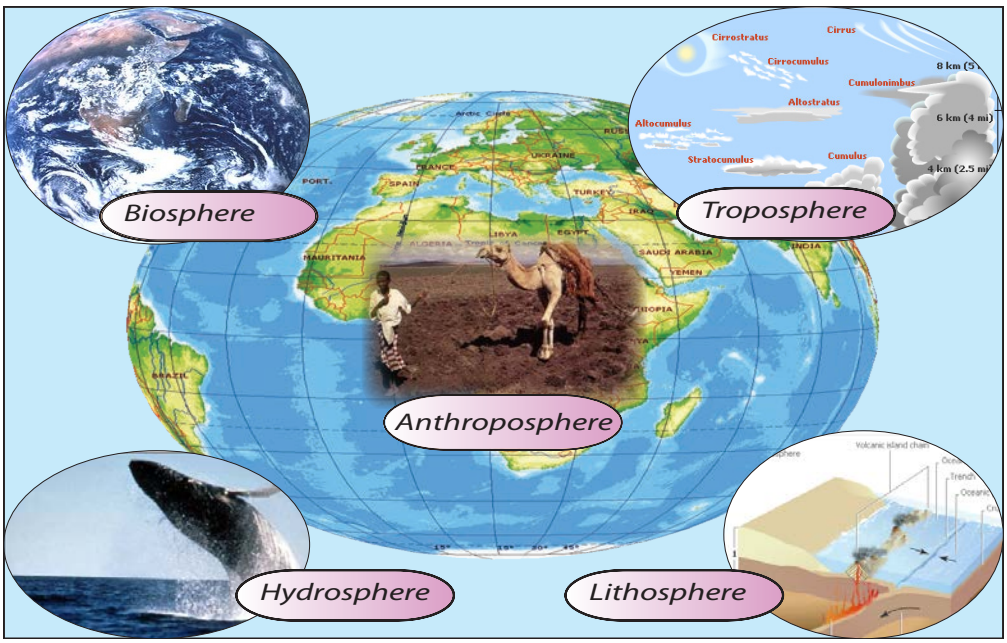

Figure 1.1: **The earth's Geo-sphere**

Brain-storming

1 What do you understand from the above table and figure?
2 Have you seen how varied the area of study of geography is?
3 Do you understand the extent of its scope?

Geography's area of study is very wide and diverse in its nature. The subject deals with from the dry land mass of the lithosphere to the extensive oceans of the hydrosphere, from the earth's crust (surface) high into its atmosphere (troposphere) and from the natural environment to human-related phenomena. Understanding geography is key to understanding and acting effectively in our world. It is a subject that enables people to understand the earth and its environment. It also enables us to appreciate the complex balances of the human and physical elements that bind people to this planet.

Activity 1.2

1 Do you think that the scope of geography is limitless? Why or why not?
2 In your groups discuss the major areas of focus of geographical studies and present your results to your class.

It is true that geography has a very wide scope. However, this does not mean that its scope is limitless.

The major areas that geography focuses on are:

- *The earth, its position in the universe and its movements;*
- *The different physical features that constitute the earth's surface, the forces that cause them, their variations from place to place and their changes over time;*
- *The different relationships between human beings and their natural environment. Also, the interdependence and the impact that each has on the other;*
- *The conditions of the lower part of the atmosphere and the subsequent weather and climatic conditions, together with their spatial distribution and variation*
- *The materials that make up the earth and its diverse land forms;*
- *The major economic activities of humans and the impacts on the environment.*

Therefore, it is possible to conclude that although wide in its scope, geography has certain areas that it focuses upon.

Content Check

1 ***Define:*** geography, spatial interaction, biosphere, and lithosphere.

2 What makes the scope of geography very wide?

3 What are the three questions that geographers ask when they study spatial distributions?

4 ***Challenge:*** Geography focuses on the inter-relationship between human beings and their environment. Can you explain the relationship?

5 Geography's concern is much more than the study of place names. Explain this statement briefly.

1.3 APPROACHES IN GEOGRAPHY

At the end of this section, you will be able to:

- justify the merit and demerit of approaches used to study physical and human environments.

Key Terms

- Approach
- Regional approach
- Systematic approach
- Region

Brain-Storming

1 How do geographers study geography and geographic phenomena?

2 What are the methods and approaches that they employ? Discuss these questions with your friends.

Geographers, like other social scientists, have their own approaches to their subject. The most frequently adopted approaches are:

A Regional approach

B Topical or systematic approach

Activity 1.3

What are the differences between the regional and systematic approaches? What are the weaknesses and strengths of each? Discuss these issue, with your desk mate.

A Topical or Systematic Approach

Unlike the regional approach, the topical or systematic approach applies a specific geographical element or phenomenon over a defined geographical unit. For example, it takes a phenomenon such as climate, land forms or culture, and treats the distribution of the selected element over a country, continent or the world at large.

In short, the topical approach seeks to establish general or common concepts of the phenomena studied, but only in terms of their relationships to distribution in an area.

Example:

- *The geography of hunger*
- *The geography of climate*
- *The geography of agriculture*
- *The geography of population*

B Regional Approach

A geographic study that uses the regional approach focuses on a region – a defined geographic unit or locality. Within the region, the study examines a variety of geographic features. The region studied could be a subcontinent, continent or a number of countries that share a common geographic factor.

Example:

- *The geography of Africa, Asia, or Oceania, etc*
- *The geography of sub-Sahara.*
- *The geography of the Middle East.*
- *The geography of the Balkans.*

NOTE

A region is an area or spatial unit consisting of similar or homogeneous geographical features.

The similarity could be either physical (i.e., climate, landscapes, etc) or cultural-anthropogenic (i.e., religion, language, economic activity, etc.). Regions vary

in area. The size of a region is a function of the study's purpose. Regions called micro are relatively small, and those called macro are relatively large.

Dividing the world into regions is a difficult task. However, we may construct a region on the basis of any one element or interrelated elements.

Focus

Geographical studies can be made with two different basic approaches. These are the **Regional Approach and the Systematic (Topical) Approach**. The REGIONAL approach studies the various characteristics of each region (realm) of the world. It divides the world into regions with each having its own distinct features that make it different from others. This approach then studies each geographic phenomenon in that region.

SYSTEMATIC geography, on the other hand, studies one issue and looks at its spatial variations in all parts of the globe. Although geographers use these two basic approaches, they are not necessarily (regional and systematic), independent of each other. Instead, these approaches are interconnected and overlapping.

Content Check

1. What are the two approaches adopted in organizing geographical knowledge?
2. What are the differences between the systematic and regional approaches?
3. Are the two approaches independent of each other? Why or why not?
4. Which approach would best suit a study of the distribution of coffee cultivation in Ethiopia? Why?

1.4 MAJOR SCHOOL OF THOUGHT IN GEOGRAPHY

At the end of this section, you will be able to:

- compare and contrast the concept of determinism with possibilism;
- show appreciation for the significance of quantitative studies;
- verify the importance of applied geography in solving social and environmental problems.

Key Terms

- School of thought
- Determinism
- Quantitative revolution
- Applied geography
- Possibilism
- Environment

Geography has gone through a series of changes and developments. The 1930's, witnessed major radical changes in the discipline, and were turning points in the history of geography.

The most prominent of these scholars were Alexander Von Humboldt and Karl Ritter. Various schools of thought have emerged with different views regarding the relationship between humans and their environment as well as the interpretation of social problems by human. Different schools of thoughts developed. The main schools are determinism and possibilism.

Since the mid 18th C, we have been observing these two dominant schools of thought that explain relationships between humans and their environment.

Historical Notes

Alexander Von Humboldt
(1769 – 1859)

A German Geographer who traveled for 5 years in South America collecting data in order to identify relationships between the spatial distribution of rocks, plants and animals. He emphasized on the interdependence of peoples, plants and animals with one another within a specific physical setting. He then showed how people have to adapt to and affect their environment.

Sketch of Karl Ritter
(1779 – 1859)

He was the founder of the tradition of regional geography. His approach was to establish a framework for scientific comparisons and generalizations by dividing the continents into regions with distinct characteristics.

Activity 1.4

In a small group discuss how humans and the environment interact and try to answer the following questions.

1 Does the physical environment decide how people live? Why or why not?

2 Can humans adjust their environments in a way that suits their needs? How?

A *School of Determinism*

What is the basis of the philosophy of environmental determinism?

It was the dominant idea up to World War I. It advocated that the physical environment directs or is the master in determining the day-to-day activity of people.

Environmental Determinism is a philosophy that bases its view on the idea that the natural environment is an influencing factor on humans' mode of living. It believes that human activities are controlled by the environment.

It is based on the belief that the physical qualities of geographical conditions are the causes not only for people's physical differences but also for differences from place to place in people's economic activities, cultural practices and social structure. Environmental determinists thus tend to focus on the impact of the physical environment on people, rather than the reverse the influence of people on the environment. This view had strong influences on the geographic writings of the 19th century and its influence penetrated well into the 20th century.

The idea of environmental determinism was laid down by Greek and Roman scholars. They claimed that the elements of the physical environment such as climate, relief, soil and the like determine peoples mode of life. Many scientists agree that the publication of "The Origin of species" by Charles Darwin in 1859 laid the foundation for the concept of the influence of the environment on people and other organisms. In the same way, Demolins (1901 and 1903) postulated that "the flourishment of society is based on the environment."

Furthermore, determinists consider human beings as passive agents where the physical factors determine their attitude and process of decision making. However, this outlook was strongly criticized by geographers who favored a new school of thought known as environmental possibilism. The prominent scholars who supported the school of determinism were: Charles Darwin, Demolins, F. Rutzel, etc.

Activity 1.5

1 Do you agree with the idea of environment conservation? Why or why not?
2 With your friends, discuss why the philosophy of environmental determinism was severely criticized by the proponents of environmental possibilism.

B *Environmental Possibilism*

What do you think of environmental possibilism is? How is it different from environmental determinism?

The school of possibilism was postulated by Febvre. His supporters argue that human beings are masters of the environment and they can judge their benefits. They argued that there are no necessities but only possibilities.

Proponents of this view emphasize that two-way relationships exist between humans and the environment. They state that people can influence the environment to enhance their way of life.

These geographers agree that the environment can potentially affect people's activities, but they believe that we can use our knowledge and skills to regulate these effects. According to possibilists, it is impossible to explain the difference between human society and the history of that society without referring to the influence of the environment. Nowadays, the school of possibilism is becoming widely accepted since it recognizes human's ability to change its environment using the latest or better technologies.

Activity 1.6

In a small group, discuss what humans have done so far to modify environments in ways that enhance their ways of life.

Example: Human beings have been using irrigation to turn barren lands of the deserts into agriculturally productive areas.

C *The Quantitative Revolution*

What was quantitative revolution? How did it affect the significance of geography?

The quantitative revolution was one of the four major changes in the history of geography. The other three were regional geography, environmental determinism and critical geography.

For centuries, geography had been primarily a descriptive science that tried to describe how things are distributed on the earth's surface. The subject focused mainly on the "where" of geographic features. In the early 1950s, however, socio-economic, physical, and political features and processes are spatially organized and ecologically related. The outcomes created by them are evidenced for a given time and place. As a result, a more abstract, theoretical approach to geographical research has emerged, and the analytical method of inquiry evolved this new approach. Used rigorous mathematical formulae, borrowing from the physical sciences. This movement in geography is called the "**Quantitative Revolution**", It began to affect geographers and major geography departments in universities.

What are the contributions of the quantitative revolution to the development of geography?

The revolution was founded by geographers and statisticians in Europe and the United States. With the purpose of bringing 'scientific thinking' to geography, the quantitative revolution led to an increased use of statistical techniques. In particular, it emphasized multivariable analysis and the use of computers in geographical research. The methods adopted included various mathematical techniques that were more precise than the descriptive methods of regional geography.

The quantitative revolution was a response to the crisis in the 1950's. The crisis was the result of the challenges that geography faced during late 1940's and early 1950's. Some of the major challenges were:

- *The shutting down of many geography departments and courses. for example, the geography program at Harvard University was abolished in 1948.*
- *The division between Human and Physical geography was continued-demanding the autonomous subject hood of Human geography.*
- *Geography was seen as solely descriptive and unscientific. As some argued, there was no explanation of why processes or phenomena occur in geography.*
- *Geography was not useful for solving problems. Hence, it was seen as exclusively educational.*

- *Questions regarding the nature of geography persisted, for example, it was unclear to some people whether geography was a science, an art, a humanities subject or a social science.*

The revolution introduced a rapid change in the methodologies used in geographical research. This change led to a shift from ***descriptive geography*** to ***empirical law-making geography***. As a result, disagreement between scholars of different schools such as those who supported quantitative methods and those who favored the descriptive approach arose.

NOTE

The quantitative revolution was driven by the development of the computer and its ability to rapidly process data. Quantitative geographers "went radical" and applied computers, statistics, and mathematical models to the study of geographers.

Some of the techniques that became central to geography during the quantitative revolution were:

- *Descriptive statistics*
- *Inferential statistics*
- *Basic mathematical equations and models, such as gravity models*
- *Deterministic models e.g., Von Thünen's and Weber's location models*
- *Statistical models, using concepts of probability*

The analytical method of inquiry led to the development of logically acceptable generalizations about the spatial aspects of closely defined events under different natural and cultural conditions. Generalizations may take the form of tested hypotheses, models, or theories.

Adoption of the analytical approach helped geography to become a more law-giving science, and the conception of the discipline as an idiographic field of study became less acceptable. This process began in the 1980s.

D The Emergence of Applied Geography

What is Applied Geography? When did it appear as a school of thought?

Geography has been used since human beings appeared on earth. Primitive human and his successors had a good knowledge of the geography of the things

that they needed for survival. However, geographic knowledge had little chance of being used to solve geographic problems.

Another major development occurred in the latter part of the 20th Century in geography. This development was the development of applied geography; geography became a science that we can use to solve socio-economic and political problems.

Applied geography had its roots in the quantitative revolution. The emergence of applied geography increased the applicability of geographic knowledge. Today, many geographers work as urban planners, GIS analysts, environmentalists, cartographers, location analysts, transportation planners, developing-nations specialists, public-transportation planners, highway planners, university-facility planners, transportation logisticians, demographic analysts, etc.

NOTE

Applied geography is the use of geographic analysis in private business, government, non-profit organizations etc. Applied geography solves problems and aids in decision making.

Content Check

1. What is environmental determinism?
2. What is environmental possibilism?
3. What was the quantitative revolution?
4. What is applied geography?
5. Discuss the contributions of the quantitative revolution to the development of geography.

1.5 THE RELATIONSHIP BETWEEN GEOGRAPHY AND OTHER DISCIPLINES

At the end of this section, you will be able to:

- relate elements of geographical study with other fields of studies;
- explain the role of geography in connecting various fields of study.

Key Terms

- Interdisciplinary
- Social sciences
- Natural sciences
- Interdependence

Geography is an interdisciplinary subject. It has strong relationships with various disciplines in both the natural and the social sciences. For instance, human geography is highly linked with social sciences, while physical geography is related to the natural sciences. Knowledge and information in geography and the other sciences are interchangeable and interdependent.

Activity 1.7

What fields of study interrelate with geography? Discuss this question in your group. Please try to remember the lessons you have learned in Grades Nine and Ten.

As you might have noted, many academic disciplines are linked with geography. Among them are: biology, meteorology, geology, astronomy, economics, political science, history, demography, sociology, chemistry, and mathematics.

Can you describe how each of the above disciplines relates to geography? How does each connect to geography's specialized fields of study?

As indicated earlier, geography is closely linked to the social and natural sciences. Geography shares facts with them and explains certain aspects of those sciences. Observe how geography relates to these other sciences:

Biology: is a science that deals with all forms of life, including their classification, physiology, chemistry, and interactions. As biogeography is the study of plant and animal distribution, it is linked with biology.

Meteorology: is the scientific study of the earth's atmosphere, especially its patterns of climate and weather. Hence, it is related to the sub field of geography called climatology.

Geology: is the study of the internal composition of the earth. It examines the forces that change the earth's structure. It also investigates the history of those changes. Geology is linked with such branches of geography as Geomorphology and soil geography.

Astronomy: is the scientific study of the universe, especially of the motions, positions, sizes, composition, and behavior of astronomical objects. Topics about the universe, in particular the solar system, that are taught in geography are borrowed from astronomy.

Economics: is the study of the production, distribution, and consumption of goods and services. As economic geography is concerned with economic activities, it is strongly related to this field.

Political Science: is the study of political organizations and institutions, especially governments. This discipline has strong connections with political geography.

History: is a systematic and organized study of the past socio-economic and political processes of human society. History helps us anticipate the future. As it is concerned with the past, it is strongly linked with historical geography.

Demography: is the study of human populations, including their size, growth, density, and distribution, and statistics regarding birth, marriage, disease, and death. The body of knowledge that we learn in population geography is somehow linked with the subject matter of demography.

Physics: is the study of matter and energy and the effects they have on each other.

Sociology: is the study of the origin, development, and structure of human societies and the behavior of individual people and groups in society. It connects to cultural geography.

Mathematics: is the study of the relationships among numbers, shapes, and quantities. It uses signs, symbols, and proofs and includes arithmetic, algebra, calculus, geometry, and trigonometry. Mathematical geography is linked with this academic discipline.

Activity 1.8

In a small group, list some topics and concepts of geography that are related to the following disciplines:

i	Geology	iii	Economics
ii	Demography	iv	Political science

Why do we say that geography is an interdisciplinary subject?

Unit Review

UNIT SUMMARY

In this unit, we have described the nature of geography. We defined geography, discussed its scope, discussed its approaches, examined its major schools of thought and examined its relationship with other sciences.

In summary:

- Geography is a systematic study of the spatial distribution of phenomena on the surface of the earth and of the two-way interaction between the natural and human environments.
- The scope of geography is very wide. It attempts to study many parts of the geosphere: the lithosphere, hydrosphere, atmosphere, anthroposphere and biosphere.
- Geographical studies are conducted based on two basic approaches, regional geography and systematic geography. The first studies all aspects of phenomena found in a region, while the latter investigates a single phenomenon globally.
- Environmental determinism and environmental possibilism are the two dominant philosophies that geographers use when they examine the relationship between humans and their environment.
- The philosophy of environmental determinism is related to the idea that the environment is the factor that determines peoples' mode of living. In contrast, the possibilist philosophy emphasizes the two-way relationship between humans and the environment and the possibility for humans to change the environment.
- The emergence of the quantitative revolution in the 1950s and 1960s contributed a lot to the development of geography. It incorporated different statistical techniques in to geographical studies.
- The emergence of applied geography increased the practical applicability of geography. Applied geography solve, many different socio-economic and environmental problems.
- Geography is highly integrated with other disciplines. It shares a wide range of information with the social and natural sciences.

REVIEW EXERCISE FOR UNIT 1

I *True or False*

1 The fact that deserts can be turned into agriculturally productive areas through irrigation supports the philosophy of environmental possibilism.

2 Geography is less practical in today's world than it was before.

3 According to the determinist approach, human cannot change or influence the environment.

4 Systematic geography is the study of the general characteristic of a region.

5 The facts and principles of the natural sciences can be applied in geography.

II *Matching: match the items given in the box with the statements given below.*

A	Quantitative revolution	F	Demography
B	Febvre	G	Political geography
C	Alexander Von Humboldt	H	Applied geography
D	Topical approach	I	Demolins
E	Regional approach		

6 An ardent supporter of environmental determinism.

7 An ardent supporter of environmental possibilism.

8 A nomethic or empirical law- making geography that occurred in the mid 20th C.

9 A geographic school largely concerned with the structure of the ecological system and other social problems.

10 A geographic approach that emphasizes various aspects of a defined spatial unit.

11 A geographic approach that singles out one or two elements and treats the distribution globally.

12 A branch of geography that deals with the dynamic and static aspects of population.

13 A branch of geography that deals with boundary, communication and activities between countries in relation to political power.

III *Multiple Choices*

14 A Greek philosopher who pioneered the definition of geography was:

A Plato
B Erathosthenes
C Herodotus
D Pythagoras

15 Which of the following opinions do you accept?

A The definition of geography is static.
B Geography is a discipline which does not have one single definition.
C Geography does not have any relationship with other disciplines.
D The definition of geography is not subject to any change.

16 Which of the following statements about geography is correct?

A Physical phenomena are evenly distributed over the surface of the earth.
B There is a one-way relationship between humans and their environments.
C All elements in the natural environment affect the way of life of its inhabitants.
D Human beings are not capable of modifying their environments.

17 The main theme of possibilism is:

A The two-way relationship between human and nature.
B Human beings are not capable of modifying their environments.
C Human society is a passive agent in the man-environment relationship.
D Human beings are always under the influence of their environment.

18 Which of the following reflects the deterministic outlook?

A Self reliance.
B People who live in cold climates are stronger and more courageous than those living in warm climates.
C Human is capable of modifying his environment.
D Analyses social structure in terms of human activities.

IV *Fill in the blank space.*

19 A German geographer who tried to show how people adapt to and are influenced by the environment was _____.

20 The sub field of geography that studies how plants and animals are distributed is called _____.

21 Part of the exosphere that represents the cultural landscape of the earth is _____.

22 A Greek scholar who coined the word 'Geography' for the first time was _____.

23 The use of geography for socio-economic and political problem solving and planning is know as _____.

V *Define the following terms.*

a Lithosphere

b Troposphere

c Hydrosphere

d Biosphere

e Anthroposphere

VI *Answer the following questions briefly.*

24 What is geography?

25 What is the difference between regional and systematic geography?

26 What is the difference between environmental possibilism and environmental determinism?

27 What is applied geography? What is the historical background for its emergence?

28 Discuss the relationship that exists between geography and the other social sciences.

29 What was the quantitative revolution in geography?

30 What is the geo-sphere?

31 What are the basic questions that geography addresses in the second half of the 20th C?

32 Geographers argue that "Geography is not solely the study of place names, length of rivers, heights of mountains, etc." State it briefly.