

CHAPTER 1

Tick the correct option.

1. The literal meaning of 'geo' is?
(a) Mountain (b) Sun (c) Star (d) Earth
2. The term "Geography" was derived from which language?
(a) Greek (b) English (c) Persian (d) Urdu
3. Geography may also be named as?
(a) Environmental Science (b) Astronomy (c) Space Science (d) Geology
4. Geography actually means?
(a) Study of Universe (b) Study of Stars (c) Study of Earth (d) Study of Man
5. Geography deals with the study of the factors relating?
(a) Physical Environment (b) Artificial Environment
(c) Natural Environment (d) Human Environment
6. Geography is divided into ____ main branches.
(a) 1 (b) 2 (c) 3 (d) 4
7. International Geographic Conference was held in?
(a) 1891 (b) 1930 (c) 1958 (d) 1999
8. Geology deals with the study of?
(a) Mountain (b) River (c) Environment (d) Earth
9. The study of different types of feature on the Earth surface is known as?
(a) Geomorphology (b) Minerology (c) Hydrology (d) Geology
10. Meteorology deals with the study of?
(a) Maps (b) Weather (c) Mountains (d) Plains
11. Land covers the ____ % of the globe.
(a) 30 (b) 32 (c) 62 (d) 70
12. Water covers the ____ % of the globe.
(a) 30 (b) 32 (c) 62 (d) 70
13. Political Geography was started in?
(a) 1891 (b) 1930 (c) 1958 (d) 1999
14. Human Geography deals with the study of the factors relating?
(a) Physical Environment (b) Artificial Environment
(c) Natural Environment (d) Human Environment

15. Cartography deals with the study of?

- (a) Maps (b) Weather (c) Mountains (d) Plains

16. Which subject is considered as the subject of welfare?

- (a) Mathematics (b) Physics (c) Geography (d) Economics

Answer the following short questions.

1. What is the literal meaning of geography?

Ans: The word geography is derived from Greek language contain two words 'Geo' mean Earth and 'Graphy' means study. So, the literal meaning of geography is Study of Earth.

2. Define geography according to Dr. Keltie.

Ans: Geography is the study of earth with relation to environment.

3. Define geography in the words of international geographical conference 1958.

Ans: The Geography studies the earth considering it as a habitat of man in such way that his inter-relation is proven.

4. Which are different branches of geography?

Ans: Geography has two main branches.

1. Physical Geography

2. Human Geography

5. Define physical geography.

Ans: This is an important most branch of Geography. It studies all the physical features that have an influence of human environment. For example, the origin of earth, its features, movements and rotation, furthermore study of atmosphere and hydrosphere is also included in physical geography.

6. Write any three branches of physical geography.

Ans: Different branches of physical geography are as follow:

1. Geology

2. Environmental Geography

3. Climatology

4. Mathematical Geography

5. Geomorphology

6. Engineering Geography

7. Differentiate climatology and meteorology.

Ans: Climatology is the branch of geography that studies different type of climates prevailing all over the world as different types of climates prevail in the world. The classification of the climates is also studied in this branch.

Meteorology is the study of different atmospheric condition at different time that includes the components of weather and climate. For example, temperature, atmospheric pressure and humidity. With the help of this study, the forecast can be made about the futures changes in weather.

8. Define geomorphology.

Ans: It studies the surface features of the earth. The difference between the physical geography and the geomorphology is that the physical geography studies different aspects of the earth. For example, internal structure, atmosphere etc. but geomorphology relates with the study of shapes and formation of its surface features.

9. What is meant by hydrology?

Ans: This branch is related to the study of water. Especially the water in streams, lakes and wells furthermore it also includes the melt water from ice sheets. In hydrology the discovery of water, flood control and conservation are also studied.

10. Discuss oceanography.

Ans: This branch of geography studies the oceans and its different attributes such as its nature, movements, temperature, depth and oceanic floor and its flora and fauna.

11. Define geology.

Ans: It discusses the structure, composition of the Earth. All the things that make up the solid earth and all the forces that change the surface of the earth, the structure of the rocks and their distribution, and the surface features of the earth etc. It is divided into two sub branches:

1. Physical Geology
2. Historical Geology

12. What is environmental science?

Ans: In this branch, the impact of physical environment on the human activities is studied.

13. Define human geography.

Ans: Geography means the impact of environment on humans that means that human beings are directly affected by the physical aspects on earth. The human activities mainly happened due to influence of geography are studied in human geography.

14. Which are different branches of human geography?

Ans: Different branches of geography are as follow:

1. Political Geography
2. Historical Geography
3. Economic Geography
4. Demography
5. Urban Geography
6. Population Geography

15. What is meant by political geography?

Ans: This is a new branch of geography it was started in 1930 AD. In this branch, the study of different geographical factors that influence the politics of any country are studied. It also studies the geographical importance of different political powers.

16. What is economic geography?

Ans: The study of resources and the development of different countries are studied in economic geography. The countries having more of the natural resources are more prosperous.

17. Write a note on commercial geography.

Ans: Commercial geography is much similar to commercial geography. This branch deals with the study of different markets in the world, production and consumption of goods by different countries and trade etc.

18. Write a short note on urban geography.

Ans: This branch studies the urban settlements, their location, their internal structure, economic classes and planning.

19. What is historical geography?

Ans: In this branch of geography, the events that took place in past are studied with relation to their location and the importance of the geographical factors effecting these events.

20. Differentiate population geography and demography.

Ans: Demography is the branch of geography that deals with the data involving the population, races and people.

Population geography discusses the world population distribution, density, rate of increase and related factors.

21. How may geography be beneficial for the study of international relations?

Ans: Geographers know very well about the geographical features of an area, locations, political and economic aspect etc. So, they can serve very good ambassadors for their country.

22. How may geography be beneficial for the solution of economic issues?

Ans: Whenever the UNO organized the conference on international economic development it provides opportunities to the geographer to share their views in the conference.

23. Write the scope of geography.

Ans: In the present system of education, the field of study for geography is very vast. Its main objective is to enhance Education, Tourism, Archeology, International Brotherhood, and professional values. In different departments of the country Geographer can provide their services. For example, Mass Communication and Information Department,

Transportation Department, Radio and Television Corporation, Meteorology Department, Forest Department, Irrigation Department, Land Utilization Authority and many development authorities of different towns and cities. Furthermore, many specialized institutions like survey of Pakistan, Tourism Department and Department of Population Welfare.

Answer the following Long Questions

- ❖ Which are different branches of Physical Geography? Write in detail.
- ❖ Write the scope and importance of Geography.

CHAPTER 2

Tick the correct option.

1. The outer most layer of the earth surface that is habitat of Human is called?
(a) Atmosphere (b) Hydrosphere (c) Biosphere (d) Lithosphere
2. Age of the Earth is? (Million Years)
(a) 3000 (b) 3200 (c) 450 (d) 5000
3. The center of solar system is?
(a) Mars (b) Earth (c) Moon (d) Sun
4. How many stars are there in the solar system?
(a) 5 (b) 8 (c) 9 (d) 12
5. Diameter of the Earth on equator? (km)
(a) 12746 (b) 12076 (c) 10746 (d) 9746
6. Diameter of the Sun is how much greater than diameter of the Earth?
(a) 33 (b) 40 (c) 50 (d) 100
7. The distance between Earth and Sun is (Million Kilometers)?
(a) 540 km (b) 150 km (c) 870 km (d) 720 km
8. The nearest star to the sun is?
(a) Neptune (b) Mercury (c) Mars (d) Venus
9. The largest planet of the solar system?
(a) Jupiter (b) Earth (c) Mars (d) Venus
10. The smallest planet in the solar system?
(a) Jupiter (b) Earth (c) Mercury (d) Venus
11. The farthest planet from the sun is?
(a) Jupiter (b) Neptune (c) Mars (d) Venus

12. Total area of the Earth? (Million sq. km)
 (a) 510.1 (b) 410.1 (c) 310.1 (d) 6.10
13. Actual shape of the earth is?
 (a) Round (b) Geoid (c) Triangle (d) Oval
14. Ferdinand Magellan started his maritime journey?
 (a) 1522 (b) 1519 (c) 1509 (d) 1512
15. Average depth of the oceans? (miles)
 (a) 4.4 (b) 3.3 (c) 2.2 (d) 1.1
16. The density of oceanic crust is?
 (a) 2 (b) 3 (c) 5 (d) 7
17. Depth of continental crust is? (km)
 (a) 50.3 (b) 39.3 (c) 29.3 (d) 19.3
18. The distance between Aswan and Skandera is?
 (a) 540 km (b) 1020 km (c) 870 km (d) 720 km
19. The width of the mantle is?
 (a) 2960 km (b) 2000 km (c) 1370 km (d) 40 km
20. The layer separating the Mantle and the Earth Crust?
 (a) Continental Slope (b) Continental Shelf
 (c) Mohoro Layer (d) Slow Line
21. Mohoro Layer was discovered in?
 (a) 1931 (b) 1958 (c) 1909 (d) 1930
22. The layer separating Mantle and Core?
 (a) Asthenosphere (b) Gutenberg Discontinuity
 (c) Mohoro (d) Crust
23. Who presented tetrahedral theory?
 (a) Reitzel (b) Lutein Green (c) Ibn-e-Khuldoon (d) Aristotle

Answer the following short questions.

1. Write a note on Lithosphere.

Ans: The outer solid layer of the earth in which man is living is called Lithosphere. The word "Litho" means stone or rock. But not only stones and rocks make up the crust of the earth. There are softer materials also like sand and clay. There are large boulders that make up the mountains. So, any material of matter that makes up the solid crust of the earth is called Rock and is considered a part of the Lithosphere.

2. Discuss the Atmosphere.

Ans: This sphere is wrapped around the earth like an envelope and is in gaseous state. The air has surrounded the solid earth from all sides.

3. What is Hydrosphere.

Ans: The water in form of oceans, seas, lacks, and rivers covers most of the part of the lithosphere. On the whole, all the water bodies are collectively called Hydrosphere. It covers up to 72% area of the earth surface.

4. What is the distribution of Water and Land on the Earth?

Ans: 70% area of the world is covered with water mostly in the form of oceans while rest of 30% area is land.

5. Write the age of the Earth.

Ans: The estimated age of earth is 4.5 Billion years or 4500 Million years.

6. Define solar system.

Ans: The sun and the planets Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune along with their natural satellites are called Solar System.

7. Which of the two planets of our solar system have no moon?

Ans: First two planets of solar system, Mercury and Venus have no moon.

8. Name any four planets of the solar system.

Ans: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune are the planets of solar system.

9. Differentiate the planets and the stars.

Ans: The Difference in between stars and planets is discussed as follow

Stars	Planets
Stars do not move in an orbit.	Planets move in an orbit around the sun.
Stars have their own light.	Planets do not have their own light.
Stars are not the part of solar system.	Planets are the part of solar system.
Stars are smaller in size.	Planets are much larger in size.
Stars do not have any satellite.	Planets may have their own satellite.

10. What is the equatorial diameter of the Earth?

Ans: Equatorial diameter of earth is 12746 km.

11. Write a short note on the size of the Earth.

Ans: To find out the size of the earth an Egyptian scientist conducting the following experiment.

At noon when sun is shining overhead on Alexandria i.e. makes an angle of 90 he observed that at a distance of 720 km at Aswan the elevation of sun was observed at 83 which

shows that for the distance of 720 km there is difference of 7 in the angle of sunrays. So, the distance for 360 i.e. the circumference of the earth can be calculated as follow:

$$7 = 720 \text{ km}$$

$$1 = 720/7 \text{ km}$$

$$360 = 720/7 \times 360 = 38400 \text{ km}$$

It was calculated to be 40225 km afterwards. The equatorial diameter of the earth is 12746 km while it is a little bit less from North to South poles which 12704.5 km.

12. What do you know about the shape of the earth?

Ans: The is considered round but in fact it is not a perfect circle or sphere. It is flattened at the poles. It's neither a spheroid nor ellipsoid. Its shape is an example in its own, as it cannot be shown through any geometrical shapes. Therefore, it is named as Geoid or Earth Like.

13. What is continental crust?

Ans: The rock in this layer of the earth have lesser density that is 2.7 while this layer has an average depth of 19.3 km.

14. Define Moro Layer.

Ans: Between the crust of the earth and the underlying layer of mantle there is a layer of discontinuity. It is called Mohoro layer. A Yugoslavian scientist named Mohorovicic in **1909** discovered this layer.

15. What is mantle layer?

Ans: This shell is located under the crust of the earth and is composed of dense rocks its depth is about 2960 km. It is solid but has the characteristics of a dense liquid. Another important layer is a thin layer located at the depth of 100 km to 200 km below the surface and is less rigid and elastic compared to the layers lying above and below it. This layer is called Asthenosphere or weaker shell.

16. Define Asthenosphere.

Ans: This is a thin layer located at the depth of 100 km to 200 km below the surface and is less rigid and elastic compared to the layers lying above and below it. This layer is called Asthenosphere or weaker shell.

17. Define Inner Core.

Ans: It is a mixture of Iron and Nickel and is in solid state. It is also called NiFe. The total depth of this part is considered to be 1370 km between the Mantle and Core

18. Define Gutenberg Discontinuity.

Ans: There is another line of discontinuity within Inner core that is called Gutenberg Discontinuity. It is located at a depth of 2900 km where the temperature is estimated to be 3700⁰ C.

19. Write a short note on outer core.

Ans: It is imagined to be in liquid state and includes molten iron is has a depth of 2000 km.

20. Discuss the tetrahedral theory.

Ans: Lothian presented the tetrahedral theory to explain the landmasses and ocean basins. According to his theory the Earth was a tetrahedron that was standing upright on its tip. The four flat sides of the tetrahedron represent the Oceans and the corners the continents. The upper flat part shows the Arctic Ocean and its corners represent the sphere of landmasses. The three vertical lines show the North South aligned continents. The point to the South represents Antarctica. It is considered that there was a sea between Europe and Asia. The remnants of this sea are still found in form of Caspian Sea and Persian Gulf. This shows that the land and water are located antipodal to each other.

21. What is meant by Antipodal?

Ans: According to tetrahedral theory, land and water on earth are antipodal that means that land is there in the opposite direction of water on earth and vice versa.

Answer the following Long Questions.

- ❖ Write about the size and shape of the earth in detail.
- ❖ Briefly discuss the internal structure of the Earth with all of its classifications and depths.

CHAPTER 3

Tick the correct option.

1. Igneous rocks are also known as?
(a) Secondary Rocks (b) Primary Rocks (c) Sill (d) Dike
2. The common example of Igneous rock?
(a) Sand (b) Marble (c) Lava-Basalt (d) Limestone
3. Volcanic Rocks are?
(a) Chemical (b) Layered (c) Non-crystall (d) Crystals
4. The common type of Plutonic rock is?
(a) Sand Stone (b) Graphite (c) Granite (d) Coal
5. The other name of sedimentary rocks is?
(a) Dike (b) Sedimentary rocks
(c) Volcanic Rocks (d) Stratified Rocks
6. The best example of sedimentary rocks?

- (a) Granite (b) Marble (c) Shell (d) Basalt
7. Limestone is which type of rock?
 (a) Igneous (b) Metamorphic (c) Carbonaceous (d) Calcareous
8. Shale is which type of rock?
 (a) Calcareous (b) Argillaceous (c) Arenaceous (d) Carbonaceous
9. Which is not the metamorphic rock?
 (a) Dimond (b) Coal (c) Slate (d) Marble
10. The origin of diamond is?
 (a) Chalk s(b) Coal (c) Clay (d) Sand
11. Which one is not metamorphic rock?
 (a) Dimond (b) Clay (c) Slate (d) Marble
12. Dimond is which type of rock?
 (a) Organic (b) Metamorphic (c) Sedimentary d) Igneous

Answer the following short questions

1. Define rock.

Ans: In the earlier time, the earth was in a liquid state. As it released the heat it solidified and a thin layer of solid matter covered its surface. This rust of the Earth is called rock. In other words, it is called the Lithosphere.

2. Write a short note on Igneous rocks.

Ans: These are the primary rocks that are made magma. This material was in liquid form but then cooled down and solidified.

3. Differentiate Lava and Magma.

Ans: The hot molten material inside the earth is present within the surface of the earth known as magma. The same magma when comes out of the earth's surface is called lava.

4. What is meant by Sill and Dyke?

Ans: The horizontal layers of magma in hypabyssal rocks are called *Sills* while the vertical rocks solidified in the cracks are called *Dykes*.

5. What is meant by hypabyssal rocks?

Ans: These rocks are formed because of solidification of magma at lesser depths in the cracks and fissures under the surface of the earth. These rocks are formed with magma cooling down gradually and at a slower rate thus the formation of crystals take place.

6. What is meant by Plutonic rocks?

Ans: At the greater depths below the surface of the earth when the magma cools down in great quantity. The crystal formation in these rocks is much finer and crystals are well enhanced. The most famous plutonic rock is *Granite*. Quartz and Feldspar are the major components of these rocks.

7. Write a short note on sedimentary rocks.

Ans: These rocks are formed after the wear and tear of primary rocks. The sediments or the particles accumulate are cemented again to form the sedimentary rocks.

8. What is conglomerate?

Ans: The larger part of sedimentary rocks like pebbles are gravel form a layer known as conglomerate.

9. What is meant by lacustrine deposits?

Ans: Sand, clay and pebbles are deposited as layers on the floor of lakes and make up the compact and thick layers of the sediments. These layers are exposed. When the lakes are dried up due to excessive evaporation.

10. What do you know about marine deposits?

Ans: When river falls into a sea the load of the river is deposited on the ocean floor, the pebbles, and heavier materials are deposited near the shore while lighter load is carried farther to the ocean. At some places, the shells of the living creatures are accumulated on the ocean floor to make the rock rich in calcium.

11. Define organic rocks.

Ans: The rocks that came into being from the remnants of the animals and plants are called organic Rocks. These are of two types those that are formed due to accumulation of shells and bones of animals in shallow waters i.e. Limestone. The other is formed because of the decomposition of plants; carbon is a major component of such rocks.

12. Where are carbonaceous rocks found in Pakistan?

Ans: Carbonaceous rocks are found in Dandot, Makkarwal, and Potwar Plateau in Pakistan.

13. Name the four sedimentary rocks.

Ans: Sedimentary rocks are as follow:

- (1) Arenaceous Rocks
- (2) Argillaceous Rocks
- (3) Calcareous Rocks
- (4) Carbonaceous Rocks

14. How are the calcareous rocks formed?

Ans: These rocks are made from the skeletons and remnants of animals. Calcium is the main component. Chalk and Limestone are the example of such rocks. In Pakistan these rocks are found in Hazara and Khewra.

15. Define Arenaceous rocks.

Ans: These rocks are made of sand particles cemented and compacted together, Quartz particles are major parts of these types of rocks. The example is *sandstone* and *pebble*.

16. Define Argillaceous rocks.

Ans: These rocks are mainly made up of clay, *Shale* is the best example of such rocks. These rocks are found in excess in Dhullian, Joya Meer and Khewra in Pakistan.

17. Write two characteristics of sedimentary rocks.

Ans: Characteristics of sedimentary rocks are as follow:

- 1- Sedimentary rocks are made of small particles observed in sandstone.
- 2- These are found in layered structure therefore these are also called Stratified Rocks.
- 3- Plants and Animals fossils are also found in these rocks.

18. How the diamond is formed?

Ans: Diamond was originally coal in the ancient times but metamorphosed in such a way that its origin cannot be recognized.

19. Name any two metamorphic rocks.

Ans: Famous metamorphic rocks are:

- Graphite
- Marble
- Gneiss
- Slate
- Diamond

Answer the following Long Questions

- ❖ Discuss the Igneous rocks in detail.
- ❖ What do you know about the Sedimentary Rocks? Answer with examples.

CHAPTER 4

Tick the correct option.

1. How many billion years, the Earth is old?

- (a) 2.5 (b) 3.5 (c) 4.5 (d) 5.5

2. The permanent landforms on Earth?

- (a) Forests & Desert (b) Plains & Mountain
(c) River & Ocean (d) Continents & Ocean

3. Which are the permanent landforms?

- (a) Mountains (b) Plateaus (c) Plains (d) Oceans

4. Earth Crust is made of plates?
(a) 7 (b) 10 (c) 12 (d) 15
5. The theory regarding formation of mountains is called ____ theory?
(a) Darvon (b) Big Bang (c) Plate Theory (d) Tetrahedral
6. Drift theory was presented by?
(a) Wegener (b) Kiltie (c) Rater (d) Reitzel
7. Alpine mountains are million years old?
(a) 25 (b) 60 (c) 280 (d) 400
8. Hercynian mountains are million years old?
(a) 240 (b) 260 (c) 280 (d) 300
9. Age of the Caladonian Mountains is? (Million Years)
(a) 25 (b) 50 (c) 280 (d) 400
10. How many types of mountains are there with respect to formation?
(a) 3 (b) 4 (c) 5 (d) 6
11. Himalayas are which type of mountains?
(a) Folded (b) Block (c) Residual (d) Volcanic
12. Satpara Moutains are located?
(a) Pakistan (b) India (c) China (d) Japan
13. Satpara and Mahadev Mountains of India are?
(a) Folded Mountains (b) Block Mountains
(c) Volcanic Mountains (d) Residual Mountains
14. Guadiana mountains of Spain are which type of mountains?
(a) Folded (b) Block (c) Residual (d) Volcanic
15. Amazon Basin is generally known as?
(a) Veldt (b) Steppe (c) Prairies (d) Salvos
16. Cotopaxi are which type of mountains?
(a) Folded (b) Block (c) Residual (d) Volcanic
17. Fujiyama Mountains are located in?
(a) Korea (b) Japan (c) China (d) Germany
18. Types of plateau are?

- (a) 2 (b) 3 (c) 4 (d) 5
19. The highest plateau in the world is?
 (a) Deccan (b) Potowar (c) Bolivia (d) Tibet
20. Elevation of Tibet Plateau is (meters)?
 (a) 4000 (b) 4500 (c) 4200 (d) 5000
21. The plateau in between Plains and Mountains or Mountains and Oceans?
 (a) Piedmont (b) Inter-mount (c) Gondwana (d) Continental
22. Inter-Mount plateau is covered with?
 (a) Mountains (b) Plateaus (c) Plains (d) Oceans
23. Types of structural plain?
 (a) 2 (b) 3 (c) 4 (d) 5
24. Flood plains are formed by?
 (a) Sand (b) Granite (c) Loess (d) Silt

Answer the following short questions

1. What is meant by Landforms?

Ans: Different forces both internal and external, have been bringing about the change in the earth since its origin that creates different features on the surface known as landforms.

2. Discuss the external forces of the Earth.

Ans: In external forces, the work of external factors such as river, glacier, and wind are included. These factors keep on leveling down the elevated parts of the earth. So, many landforms have come into existence due to the external forces of the earth. For example, the Mountains, Plains, Plateaus, Valleys and Lakes etc.

3. What do you mean by internal forces?

Ans: The source of such forces lies deep beneath the surface of the earth. These forces have relation with the Isostatic balance of the crust of the earth. These forces bring about changes in two different ways.

- (a) Slow Movements
- (b) Sudden Movements

4. Name some permanent landforms.

Ans: These are the features of landforms that are as old as earth itself. The permanent landforms are Continents and Oceans. It is a fact that the time at which the ocean and seas formed these are in the same state. No major change has occurred in their existence.

5. Define major landforms.

Ans: Mountains, Plateaus, and Plains are included in it. These landforms came into being due to the internal forces of the earth. Plains and Plateaus were formed because of the vertical earth movements and horizontal earth movements made the mountains.

6. What is meant by minor landforms.

Ans: The minor landforms include several earth features like Lakes, Valley, Limestone regions and spring etc.

7. Define structural landforms.

Ans: Structural landforms are the earth features formed by wearing and tearing of rocks under the influence of external forces (exogenetic forces). These include fluvial, glacial, underground water, oceanic and wind process.

8. Name the agents forming physical features.

Ans: There are several agents causing the formation of physical features that may be enlisted below:

- Underground Water (Karst Topography)
- Wind action
- Fluvial action
- Glacial action
- Ocean/Marine process

9. Write a short note on plate theory.

Ans: When two plates of the crust move towards each other and one of them is continental type and other oceanic, the latter being denser and heavier subsides under the lighter continental plate. The oceanic plate melts because of the high temperature, as the layer of mantle underlying this place is very dense this molten material starts to rise and reaches the surface in molten state. In this way it leads to formation of intrusive rocks and layers of lava on the surface. Thus, the convergence zone of the plates becomes the mixture of lava, metamorphic rocks and sediments. When this hot movements stops the underlying oceanic crust pushes up this material and for mountain range.

10. Define mountain.

Ans: Mountain is the landform that has steep sloppy, rocky and uneven surface with a narrow top usually with a narrow top. Its elevation is minimum 1000 meters from sea level.

11. Classify the mountains according to structure/formation.

Ans: The mountains are divided into four types according to the formation.

- 1 Folded Mountains
- 2 Block Mountains
- 3 Residual Mountains

4 Volcanic Mountains

12. Classify the mountains according to age.

Ans: The types of mountains according to age are as follow:

Sr. No.	Period	Geological time
1.	Alpine Mountains	25 million years
2.	Hercynian Mountains	280 million years
3.	Caledonian Mountains	400 million years

13. Write a short note on Caledonian mountains.

Ans: These mountains belong to the oldest period. The geologists believe that these mountain ranges came into being at that time when a large continent was covering Europe, Asia, and Atlantic Ocean. These mountain ranges covered the most parts of this gigantic continent. As this system is very old and is subject to the denudation for a long period of time causing the loss of height. The creeks and gulfs have been formed, most part of Scotland has become moorland and most parts of Norway are marshy.

14. Write a short note on block mountains?

Ans: These mountains have been formed in two ways:

(i) A block is lifted between two fault lines because of the earth's internal movements and forms a mountain.

(ii) The land subsides on the sides of a block, forming a block mountain in the middle.

Sometimes a continuous mountain range becomes an irregular series of blocks because of the wear and tear of softer rocks while the blocks of hard rock are left behind. Some of the high parts become the plateau plains and rest of the mountain ranges form the Block Mountains.

15. Write a short note on residual mountains.

Ans: These are also called the mountains of denudation. The mountains that were formed a long time ago and lost their height because of the forces of denudation. They are left like a dome or a rounded hill of resistant rocks. The surrounding areas are lowered due to erosion. Sierra Morena and Sierra Guadiana in Spain and Lake District in England are good examples of residual mountains.

16. Name some famous volcanic mountains.

Ans: Fuji Yama in Japan, Vesuvius in Italy and Chimborazo and Cotopaxi in Andes mountains are famous volcanoes.

17. Define plateau.

Ans: Plateau is a part of land, which is elevated, compared to its surroundings and is leveled or flat at the top. It can be exceptionally high as in case of Tibet Plateau that has

a height of 4500 Meters. If the side of the plateau are like an escarpment such plateau is called Table Land. Generally, the height of the plateau is considered to be 300 Meters.

18. Write any two examples of plateaus/Classify the plateaus.

Ans: Plateaus may be classified as follow:

- 1- Intermont Plateau
- 2- Piedmont Plateau
- 3- Continental Plateau

19. What is meant by inter-mount plateau?

Ans: These plateaus have been formed during the mountain building. These are partially or fully surrounded by the mountains. Tibet Plateau that is the highest and most extensive plateau of the world is its best example. Bolivian Plateau is also an intermont plateau located in South America.

20. Define plains.

Ans: A flat and low part of land is called plain which is usually less than 100 meters high above the sea level. It gently slopes towards the seaside and increases towards the continental side. High plains gain an altitude of above 600 meters.

21. Which are different types of plains?

Ans: The plains can be classified into three main types.

- 1 Structural Plains
- 2 Depositional Plains
- 3 Erosional Plains

22. Define structural plains.

Ans: These plains are of two types

- (1) Continental Structure Plains
- (2) Oceanic Structural Plains

The continental structural plains are the uplifted coastal plains that are covered with sedimentary rocks and are stable since the ancient times for example Russia Plain and North-Western Plains of North America.

The oceanic structural plains are the uplifted coastal plains that are covered with marine deposits for example the Eastern Coast of USA and Coastal Plains of Gulf of Mexico.

23. Write a note on Aeolian plains.

Ans: Aeolian Plain has a sheet of sand like in Erg, the Loess Plain as in China, Pampas of Argentina and Central USA Plains.

24. What do you know about glacial plains?

Ans: Glacial plains are the type depositional plains. These include Till Plains, out wash Plain Ground and Terminal Moraine.

25. How are the flood plains formed?/Discuss River plains.

Ans: Alluvial plains are also known as flood plains there are composed of silt that is deposited by the river. The vast fertile plains of the world have been formed because of this process for example Gangetic Plains, Indus Plains, Hwang Plains, River to basin and Mesopotamia.

26. Define erosional plains.

Ans: These plains can be divided into four types.

- By the erosion of river like the Pene Plain of South Eastern England.
- By the erosion of Glacier for example Canadian Shield.
- By the erosion of Wind like the Reg and Hammada of African Desert.
- The erosional plains on the margins of continents like the Norwegian Coastal Plain.

Answer the Following Long Questions

- ❖ Classify the mountains according to age.
- ❖ Which are different types of mountain according to structure? Write detail.
- ❖ Narrate different types of plateau and also discuss the impacts of plateaus on human life.
- ❖ Write a descriptive note on the classification of Plains.
- ❖ Write the importance of Plains in detail.

CHAPTER 5

Tick the Correct Option

1. The main source of heat on Earth is?
(a) Stars (b) Sun (c) Mars (d) Moon
2. The main agent of weathering on Earth is?
(a) Sun (b) Wind (c) Glaciers (d) River
3. The Wear and Tear of rocks is called?
(a) Exfoliation (b) Weathering (c) Erosion (d) Mass Wasting
4. Types of weathering?
(a) 2 (b) 3 (c) 4 (d) 5
5. The rate of chemical process is increased two times with the increase in temperature up to ___ °C?
(a) 5 (b) 7 (c) 9 (d) 10
6. Chemical Weathering process is faster in which type of areas?
(a) Cold Dry Areas (b) Hot Humid Area (c) Cold Humid Areas (d) Hot Dry Areas

7. In which process, the force of gravitation affects the most?

- (a) Exfoliation (b) Weathering (c) Erosion (d) Mass Wasting

Answer the Following Short Questions

1. What is weathering?

Ans: Weathering means the wear and tear of the rocks under the influence of the factors that cannot transport the disintegrated material to another place.

2. Write a note on denudation.

Ans: The term denudation means the exposure of underlying rocks due to the removal of the materials on the surface of the earth.

3. Enlist any four factors of Denudation.

Ans: The factors causing denudation are as follow:

- Weather
- Running water
- Underground Water
- Glacier
- Wind
- Waves and Currents

4. Define erosion.

Ans: This is the process in which different dynamic factors disintegrate the rocks and remove the worn-out material from its locale. The disintegrated material is transported to other places.

5. Differentiate erosion and weathering.

Ans: The difference between erosion and weathering is that in weathering, the disintegrated material is not transported and it remains at the same place while in erosion, the worn-out material is transported and deposited elsewhere.

6. Explain mass wasting.

Ans: The force of earth's gravity pulls down the loose materials along the slopes. The material is either loosened after weathering or is saturated after the rain. This process is called mass wasting.

7. Write a short note on mechanical weathering.

Ans: At day when temperature is high the outer layer of the rocks is expanded. At night, when the temperature drops to the freezing point the outer surface of the rock contracts suddenly. This expansion and contraction leads to formation of cracks along the points of

stress within the surface of the rock. At last, the rock breaks down in different angular blocks known as mechanical weathering.

8. What is meant by exfoliation.

Ans: Sometime the outer layer of the rock expands and contracts whereas the inner layers are not reacting to the temperature changes in the same manner leading to layer by layer disintegration just like the curved and smooth layers of the onion, this process is called Exfoliation or Onion Peeling.

9. Write a note on chemical weathering.

Ans: Rocks are made of several minerals that have chemical reaction with these gases and make a new chemical compound. Due to this process the wear and tear of the rock is accelerated. For example, if the iron is present in some rock, it will react with the oxygen present in the atmosphere and will make a compound named iron oxide which is in common words known as Rust.

10. How the plants play their role in mechanical weathering?

Ans: Plants play an important role in the disintegration of the rocks. If a plant grows in the crack of any rock its roots penetrate within the rock when the plants grow in size. These penetrating roots of the plants widen the cracks.

Answer the Following Long Question

❖ What is meant by weathering? Write its types and elaborate any one type in detail.

CHAPTER 6

Tick the Correct Option.

- The river is divided into ____ stages?
(a) 1 (b) 3 (c) 6 (d) 8
- V-Shape valley is formed by the action?
(a) Temperature (b) Wind (c) Glaciers (d) River
- The main feature at the upper stage of river is?
(a) Flood Plains (b) Meanders (c) Waterfall (d) Delta
- Niagara Fall is located?
(a) Europe (b) Asia (c) N. America (d) S. America
- Central part of river is which stage?
(a) Youth (b) Mature (c) Old Age (d) Rejuvenation

6. Levees are formed by the action of?
(a) Temperature (b) Wind (c) Glaciers (d) River
7. Indus River Plain is which type of plain?
(a) Structural (b) Erosional (c) Depositional (d) Glacial
8. The prominent feature of river near sea?
(a) Levees (b) Delta (c) Flood Plain (d) Waterfall
9. Which continent is covered with ice?
(a) Europe (b) Antarctica (c) N. America (d) S. America
10. Glaciers form which type of Valley?
(a) U (b) V (c) S (d) L
11. Which glacial feature is similar to Basket of Eggs?
(a) Snout (b) Drumlines (c) Kames (d) Eskers
12. Eskers is formed by the action of?
(a) Temperature (b) Wind (c) Glaciers (d) River
13. Out-Wash plains are formed with the action of?
(a) Earth Movement (b) Wind (c) Glaciers (d) River
14. Hanging Valley is formed by?
(a) Temperature (b) Wind (c) Glaciers (d) River
15. Deflation is the action of?
(a) Wind (b) Glacier (c) Waves (d) Water
16. Abrasions are formed by?
(a) Temperature (b) Wind (c) Glaciers (d) River
17. The hard surface desert is called?
(a) Erg (b) Hamada (c) Zeugen (d) Sill
18. Hamada is formed by the action of?
(a) Temperature (b) Wind (c) Glaciers (d) River
19. Needle of Cleopatra is located on the bank of river?
(a) Nile (b) Tames (c) Amazon (d) Indus
20. Pyramids are located in?
(a) India (b) Egypt (c) Iraq (d) Saudi Arabia

21. Oxygen converts the iron chemically in?
 (a) Iron Oxide (b) Iron Sulphate (c) Iron (d) Iron Sulphide
22. What is Atacama?
 (a) Desert (b) Country (c) Glacier (d) River
23. The best example of yarding is in which desert?
 (a) Kalahari (b) Gobi (c) Atacama (d) Sahara
24. Sand Dunes are formed by?
 (a) Temperature (b) Wind (c) Glaciers (d) River
25. Barkhan has which type of shape?
 (a) Crescent (b) Triangle (c) Oval (d) Round

Answer the Following Short Questions

1. What are the actions of river?

Ans: The running water (river) is one of agents of erosion and its process take place in three ways.

- **Erosion:-** Wearing and tearing of land
- **Transportation:-** Shifting of material
- **Deposition:-** Unloading of material

2. Name the stages of River.

Ans: The course of the river may be divided into following these stages:

- The upper course
- The middle course
- The lower course

3. What is meant by base level of river?

Ans: Base level is the limit below which a river cannot erode anymore. Upon entering a still body of water, river's velocity is checked and thus it loses its eroding power; hence, the approximate level of the surface of the still water body is the stream's base level. If a stream enters the sea, its base level is [sea level](#).

4. How are River Terraces formed?

Ans: River terraces are formed flood event in river valleys. During the rainy season the amount of water increases due to which vertical erosion by river is also increases and it make its valley deep and water remain in its valley. But after the flood conditions, there is lateral erosion and a new series of bluffs are formed on the old remnants of older flood plain, looking like terrace.

5. What is Ox-bow lake?

Ans: When the meanders of the river came close to one another and join themselves. Because of joining the river point a horse- shoe shaped strip of water is separated from the main channel of river and known ox-bow (Crescentic) lake.

6. What is Delta?

Ans: When a river is about to fall in sea or a lack, its speed is reduced too much and it deposits its sediment there. It is unable to flow in a single channel and divides itself into many channels. In this way, a triangular landform is formed which is known as delta.

7. What is meant by rejuvenation?

Ans: The concept of rejuvenation is directly linked with a river. Sometimes a river is flowing in its lower stage, where the slope is less and flow is smooth. At the bed of a river, the surface is uplifted due to internal movements of the earth. This would re-energize the river and initiate the renewed period of cutting/erosion.

8. Define Glaciers.

Ans: In cold areas, temperatures usually fall below the freezing point and snowfall takes place instead of rainfall. The surface of the land covered with snow is called a snowfield. The mass of ice that moves down from above the snowline, due to the force of gravity and pressure of upper ice layers is called a glacier.

9. What is Snow Line?

Ans: The climatic snowline is the boundary between a snow-covered and snow-free surface. The actual snowline may adjust seasonally, and be either significantly higher in elevation, or lower. The permanent snowline is the level above which [snow](#) will lie all year.

10. Where are continental glaciers located?

Ans: Continental glaciers are mainly found in Antarctica and Greenland.

11. How are Eskers formed?

Ans: The material comes out from the snout and is deposited near it in the form of a long and sinuous hill called eskers.

12. Write about Kames.

Ans: These are isolated mounds formed by the deposition of a glacier at any flat area. These are made up of sand, pebbles and boulders.

13. Discuss Knob and Basin Topography.

Ans: Sometimes the glacier drops the material so near to one another and a series of layered type features are formed and known as Knob and Basin topography.

14. Define Drumlines.

Ans: A long elliptical layered type of hill formed by ground debris of glacier between the glacial hills and lakes is known as drumlins.

15. What is Nunataks?

Ans: The peaks of the steep slopes and uneven hills which are protruding through the ice in the snow-covered areas are known as Nunataks.

16. Define Erratic Blocks.

Ans: Sometimes glaciers carry and transport the boulders and drop them into the glaciated plains. These blocks look prominent after melting of glacier as they have travelled significant distance known as Erratic Blocks.

17. Write about Snout.

Ans: It is also known as the mouth of the glacier. Water flowing at the base of a melting glacier forms a long tunnel that begins well inside and leads to the margin. This is known as snout.

18. Define Hanging Valley.

Ans: The tributary valleys of glaciers are higher than that of the main glacier due to uneven rate of erosion. After the melting of ice, the tributary valleys look hanging over the main valley and are known as hanging valley.

19. Name any four features formed by the action of Glacier.

Ans: The features formed in the result of the action of glaciers are as follows:

- Eskers
- Kames
- Drumlins
- Hanging Valley
- Moraine
- Erratic Blocks

20. Write a note on the chemical process of wind.

Ans: The humid air (air with moisture) absorbs the carbon dioxide and oxygen from the atmosphere. This chemical reaction causes the decomposition, by oxide and Bicarbonate. Such as the curves of Statue of Needle of Cleopatra faint within one century due to humid climate as it stands on the river Thames. While the Pyramids of Egypt are not so affected due to dry climate.

21. Define deflation.

Ans: Deflation means the blow of some dry and unstable material (sand) which results in the deficiency of material at the surface. The fine (light weight) material moves up to hundreds of kilometers and is uplifted at much height. The heavier material blows in the form of sand storm while the heaviest rough material jumps near the earth surface.

22. Define abrasion.

Ans: The wind acts in the form of friction as well. It has sharp cones that acts like a strong weapon. In this way of action, the wind is able to make any rock of uniform particles quite smooth and polished.

23. Write a note on attrition.

Ans: It means the erosion of rock in the result of collision of rock particles. The particles take the shape of sand then that is the last remain in the desert.

24. How are sand dunes formed by the action of wind?

Ans: Sand Dune is formed when any hurdle comes in the way of wind. That hurdle may be any plant, hill and shrub etc. The sand continues to be deposited at the back of hurdle until its front reaches the Angle of Repose. This angle is 33° approx. After it, the sand deposit starts to fall on slip surface.

25. Define Yarding.

Ans: When the vertical rocks with the hard surface are found in the shape of parallel beds in the result of prevailing wind, another feature like Ridge and Furrows comes into being known as yarding. The best example of such features may be seen in Atacama Desert.

26. Define Salt Pans.

Ans: The Deflation Basins expands their width and depth gradually. Sometimes, the water is accumulated in these deflations. When this depth reaches the water table, these take the form of permanent lakes. These deflations look like Salt Pans due to evaporation.

27. How is an Inselberg formed?

Ans: When an isolated rock remains in a hot desert, it looks like a monument while it's surrounding surface remains beneath. That feature is called Inselberg.

28. How are Barkhan formed?

Ans: These are Crescent like dunes. The slop is convex in the direction of wind, while concave in the opposite direction. This feature is high from the center. Barkhans continue to be formed until the wind blow in the same direction with constant speed and amount of sand particle is in excess.

29. What is Loess?

Ans: Wind causes the blow of sand and dust particles with it up to hundreds of kilometers results in deposition in the shape of heavy layer that is known as Loess. Loess usually contains silt but it also has a small amount of clay and fine sand.

Answer the Following Long Questions

- ❖ Write in detail about the physical features made by rivers/fluvial action.

- ❖ Explain different features made by the erosion of glaciers.
- ❖ Write about glacial deposits in detail.
- ❖ Write about the fluvial-glacial moraines in detail.
- ❖ Describe different physical features formed by the action of erosion of winds.
- ❖ Discuss in detail, which of the land features are formed by the depositional work of wind?

CHAPTER 7

Tick the correct option.

1. How much % area of Earth is covered with water?
 (a) 28% (b) 72% (c) 35% (d) 65%
2. Total Oceans in the world?
 (a) 2 (b) 4 (c) 5 (d) 7
3. The largest Ocean is?
 (a) Arctic Ocean (b) Indian Ocean (c) Pacific Ocean (d) Atlantic Ocean
4. The 2nd largest ocean in the world?
 (a) Arctic Ocean (b) Indian Ocean (c) Pacific Ocean (d) Atlantic Ocean
5. Amount of Sodium Chloride in ocean water?
 (a) 0.076 % (b) 3.7% (c) 3.5% (d) 27.21%
6. More evaporation causes ___ in salinity in ocean water?
 (a) Balance (b) Increase (c) Decrease (d) More Increase
7. The average salinity per thousand grams in all of the oceans is?
 (a) 50 (b) 40 (c) 35 (d) 25
8. The most saline sea of the world?
 (a) Mediterranean (b) Dead Sea (c) Red Sea (d) Arabian Sea
9. Ocean floor is divided into parts?
 (a) 8 (b) 6 (c) 4 (d) 2
10. Ocean floor is not visible due to?
 (a) Ocean (b) Air (c) Depth (d) Water
11. The Upper part of waves is called?
 (a) Tides (b) Current (c) Crest (d) Trough
12. The main reason of tides is the force of?
 (a) Earth (b) Pluto (c) Moon (d) Sun

13. The moon completes its one revolution in days?
(a) 28 (b) 29 (c) 30 (d) 31
14. High Tides take place at which dates of lunar month?
(a) 1, 7 (b) 7, 14 (c) 7, 21 (d) 1, 14
15. Gulf current flows in which ocean?
(a) Arctic Ocean (b) Indian Ocean (c) Pacific Ocean (d) Atlantic Ocean
16. Which one is the cold current of Atlantic Ocean?
(a) Northern Equatorial Current (b) Gulf Current
(c) Labrador Current (d) Brazilian Current
17. The current of Greenland is which type of current?
(a) Cold (b) Moderate (c) Warm (d) Very Warm

Answer the Following Short Questions

1. Name the oceans in the world.

Ans: the five oceans are as follows:

- Pacific Ocean
- Atlantic Ocean
- Indian Ocean
- Arctic Ocean
- Antarctic Ocean

2. Write a note on Pacific Ocean.

Ans: Pacific Ocean is the largest ocean of the world, it's areas is 166,336,00 square Km or 64,000,000 square Miles. That means it almost half of the area of all the water bodies of the world and is more than the area of the land. No other ocean can compete with it in terms of depth. Near the Philippines islands its depth is 10790 meters or 35400 feet.

3. Write a short note on Indian Ocean.

Ans: The Indian Ocean does not reach the polar areas from any side. Its pattern is like a circle with an approximate diameter of 9656 Km or 6000 Miles. There are two gulfs on its margins. The total area of Atlantic Ocean is 72,772,000 square Km or 28,000,000 square miles. There is an underwater ridge in the Indian Ocean that connects the sub-continent with Africa. The location of this ocean with respect to the surrounding landmasses that it influences the climate of the surrounding areas in term of temperature and rainfall.

4. Write a short note on the composition of ocean water.

Ans: In the sea water there is an average of **3.5%** salts of different kinds. It is hard water because of this reason. According to Ditmars, the amounts of the different salts in seawater are as follow:

Name of Salt	Percentage
Sodium Chloride	27.213
Magnesium Chloride	3.707
Magnesium Sulphate	1.658
Potassium Sulphate	0.863
Calcium Carbonate	0.223
Calcium Bromide	0.076

5. Name the most saline sea in the world?

Ans: The Dead Sea has the highest amount of salinity. Its salinity is 250 grams of salt per 1000 grams of water.

6. Discuss the factors affecting oceanic salinity.

The salinity of the sea water is not same in all places. The areas where rivers fall into the sea and bring fresh water with them the amount of salt is lesser. Whereas if there is low amount of fresh water on there is high rate of evaporation the amount of salt in the sea is higher. Rainfall, Difference in temperature and ocean currents are some other factors as well.

7. Write a note on continental shelf.

Ans: The marginal areas of every continent are undulated by oceanic water. The continental shelf is the nearest part of the coast. Its maximum depth is 600 feet or 100 Fathoms. Its width varies place to place.

8. Write about continental slope.

Ans: Beyond the continental shelf the continental slope starts and extends up to the depth of the ocean. The angle of slope is generally 2° to 4° . Wherever the undulated passes or valleys divide the shelf the continental slope has irregular ups and downs.

9. What do you know about oceanic floor?

Ans: This is the most extensive area of the ocean's profile. Its horizontal slope is very gentle. It is covered with wind-blown volcanic ash, remnants of animals and plants and with the shells or marine creatures.

10. Define wave.

Ans: The ocean water keeps on moving. Waves are generated under the influence of the winds. A light wind can create waves on the surface of water. With strong wind the waves get larger and higher. In fact, water does not move forward rather it stay in one place only the movement of wave travels from one place to another.

11. What is meant by trough and crest of wave?

Ans: The highest part of the wave is called Crest and the lowest is called Trough. The distance from Trough or Crest to Crest is called Wavelength.

12. What do you know about the size of wave?

Ans: Generally, the average height of the waves is from 6.096 Meters or 20 Feet to 12.2 Meters or 40 feet. But in stormy conditions the waves can rise up to 15.24 meters or 50 Feet and the length reaches approximately 152.4 Or 500 Feet.

13. What do you know about tides?

Ans: Tides are actually the uplifting and downstaging of ocean water. The water starts to be uplifted for six hours and then, starts to get down and keeps it up to 6 hours. In this way, the down portion of the coast becomes to be visible. This process of water continues.

14. Discuss the relation between the moon and the tides.

Ans: Moon is the nearest neighbor of the Earth. Therefore, the main reason of Tides is Moon. Part of the Earth near to the moon face the uplifting of water. Therefore, sea level raises to some extent. Similarly, the opposite side of the Earth also faces the tides. The reason of this phenomenon is the fact that when the gravitational force of moon affects the center of the Earth, the Earth moves to the moon a little bit causes the tides.

15. What is meant by high tides?

Ans: On every 1st and 14th night of the month at the time of new moon and full moon when the sun, earth and moon are in the same line. There is more gravitational pull of both sun and moon causes high tide.

16. What is meant by lower tides?

Ans: On the 7th and 21st night the moon is half and it makes a right angle with sun. The gravity of both heavenly bodies (Sun and Moon) is exerted on 90⁰ causes the low tide.

17. Define ocean current.

Ans: The flow of ocean water in form of a river or a stream is called ocean current. Actually, these are the river flowing within the sea that can attain a width of several hundred miles. Only the surface water flows in currents and with a very low speed.

18. Differentiate wave and ocean current.

Ans: Waves form due to the friction between the wind and the sea. The areas of high pressure become trough and the lower ones become crest. While, the flow of ocean water in form of a river or a stream is called ocean current.

19. Define equatorial current.

Ans: [Ocean current](#) flowing westward near the equator, predominantly controlled by the winds is equatorial current. Characteristically, equatorial-current systems consist of two

westward-flowing currents approximately 600 miles (1,000 km) wide (North and South equatorial currents) separated by an eastward-flowing countercurrent only 300 miles (480 km) wide.

20. What do you know about Sargasso Sea?

Ans: The easterlies in the Atlantic Ocean push the equatorial currents towards west. The North Equatorial and South equatorial currents are generated. When the currents reach the belt of Westerlies their direction suddenly changes. The area where there is calm the water remains stagnant and weeds grown in water, such stagnant water is called Sargasso Sea.

21. Name any four currents of Atlantic Ocean.

Ans: The currents of Atlantic Ocean are as follow:

- Equatorial Current
- Counter-Equatorial Current
- Gulf Stream
- Canary Current
- Labrador Current
- Greenland Current

22. Write about Counter Equatorial current.

Ans: Between north and south equatorial currents, another current is bounced back towards East after colliding the coasts of Mexico that is known as counter equatorial current which flows from west to east.

23. In which directions, warm and cold currents flow?

Ans: The currents that flow from the tropical regions towards the poles are called warm currents and those that flow towards the equator are called cold currents.

24. Write a short note on Cannery current.

Ans: After turning towards south from the coasts of Spain, west wind drift passes near Africa it is called Canary Current and eventually mixes up with the North Equatorial Current and one circulation of water completes.

25. Name any four currents of Pacific Ocean.

Ans: Currents of Pacific Ocean are as follow:

- Kuroshio current
- Peruvian Current
- Californian Current
- Kamchatka Current
- Falkland Current

26. Write a note on Kuroshio Current.

Ans: North Equatorial current strikes the Philippines islands in Pacific Ocean and turn towards north and near the Eastern coast of Japan where it is named as Kuroshio current.

27. Write a note on the Peruvian Current.

Ans: In the southern Pacific Ocean, there are many large and small island that divide the South Equatorial Current into many branches join together and turn to south. Reaching the zone of westerlies, these current reaches the Western Coast of South America where that is called Peruvian Current.

28. Name two currents of the Indian Ocean.

Ans: Ocean currents of Indian Oceans are as follow:

- West Australian Current
- Agulhas Current

29. What do you know about the Agulhas current?

Ans: The South Equatorial Current flows parallel to the equatorial from east to west. After striking the eastern coast of Africa it flows towards the south where it is called Agulhas current.

30. What is the effect of ocean currents on sailing?

Ans: In the past the sailing ships used to travel with the help of currents. The ship going from Europe to America used to travel towards Spain and follow the Canaries current and travel to west through north equatorial current. They used the Gulf Stream to reach back to Europe from America.

Answer the Following Long Questions

- ❖ What do you know about the oceans in the world?
- ❖ Narrate the ocean floor in detail.
- ❖ What do you know about tides? Write about its causes and different types of tides.

CHAPTER 8

Tick the Correct Option.

1. Amount (%) of Nitrogen in atmosphere?

- (a) 20.99 (b) 38.03 (c) 70.03 (d) 78.03

2. Amount of oxygen in the atmosphere? (in percentage)

- (a) 20.99 (b) 18.99 (c) 15.6 (d) 12

3. The biggest source of heat?

- (a) Volcanoes (b) Coal (c) Sun (d) Gas

4. Freezing point of water at Celsius scale?

- (a) 0⁰ (b) 20⁰ (c) 50⁰ (d) 100⁰
5. Freezing point at Fahrenheit scale?
(a) 0⁰ (b) 32⁰ (c) 100⁰ (d) 212⁰
6. Temperature is decreased at the elevation/altitude of every 100 meters?
(a) 3⁰ C (b) 5⁰ C (c) 1⁰ C (d) 0.6⁰ C
7. What is measured by thermometer?
(a) Temperature (b) Air Pressure (c) Humidity (d) Rainfall
8. Temperature zones in the world?
(a) 3 (b) 5 (c) 7 (d) 8
9. The line connecting equal temperature areas?
(a) Isobars (b) Isotherms (c) Farm lines (d) Contours
10. The standard air pressure at sea level? (in millimeter)
(a) 760 (b) 780 (c) 800 (d) 740
11. The standard air pressure at sea level? (in centimeters)
(a) 10 (b) 19 (c) 76 (d) 100
12. Barometer is used to measure?
(a) Rainfall (b) Air pressure (c) Humidity (d) Temperature
13. Instrument used to measure air pressure?
(a) Barometer (b) Rain Gauge (c) Hygrometer (d) Thermometer
14. Which type of winds are known as cyclone?
(a) Planetary Winds (b) Variable Winds (c) Local Winds (d) Eastern Winds
15. Cyclone is actually the cycle of?
(a) Humid wind (b) Similar Pressure (c) Low Pressure (d) High Pressure
16. Cyclone in Eastern America is named?
(a) Hurricane (b) Typhoon (c) Willy-Willy (d) Simoom
17. Cyclones in Europe are named as?
(a) Willy-Willy (b) Depression (c) Typhoon (d) Hurricane
18. The warm wind in the desert of Arab?
(a) Chinook (b) Simoom (c) Sirocco (d) Fohn
19. Bora blows in?
(a) Europe (b) Asia (c) Africa (d) Australia
20. Bora is which type of wind?

(a) Dry (b) Cold (c) Humid (d) Warm

21. The main source of evaporation in the atmosphere?

(a) Trees (b) Oceans (c) Lakes (d) Rivers

22. The most common type of precipitation?

(a) Snowfall (b) Mist (c) Frost (d) Rainfall

23. How many types of rainfall are there?

(a) 2 (b) 3 (c) 6 (d) 9

Answer the Following Short Questions

1. Differentiate weather and climate.

Ans: Weather is the atmospheric condition for a limited time about its temperature, air pressure, cloudiness etc. while climate is the average of the weather for a longer time span (25-30 Years).

2. What is meant by daily and annual range of temperature?

Ans: The difference of temperature between the hottest and the coldest part of the day is called Daily Range of Temperature while the difference between the coldest and the hottest month of the year is called Annual Range of Temperature.

3. What are isotherms?

Ans: The lines that join the places of equal temperature is called isotherms. These lines show the temperature of particular time for example a day, week, month, or a year.

4. What is meant by temperature lapse rate?

Ans: It has been observed that with an increase of 100 meters in altitude causes a decrease of 1°C in temperature. The decrease in temperature, because of the increase in altitude is called the lapse rate.

5. Define air pressure.

Ans: The air is a form of matter and has weight. One cubic foot air weight 1.25 Ounces. As, it has weight thus also exerts pressure. The atmospheric pressure on the sea level is about 1 kilogram per square centimeter (15 pound per square inch). The standard pressure at sea level is 76 cm or 760 mm (29.92 Inches) which is 103.2 millibar.

6. Write a note on Aneroid Barometer.

Ans: One of the types of pressure measuring instrument is aneroid barometer. It is metallic box out of which air is removed and a vacuum is created. A sensitive dial is

attached to it on which the pointer moves tell the air pressure. Besides these instruments an automatic barometer is also used which is called barograph, it automatically keeps the record of the pressure readings.

7. Name the pressure belts on the Earth.

Ans: These are the permanent pressure belts on Earth

- The Equatorial Belt of Low Pressure
- Sub-Tropical High-Pressure Belt
- The Sub Polar Low Pressure
- The Polar Caps of High Pressure

8. Write a short note on trade winds.

Ans: In both of the hemispheres, two high-pressure areas remain constant thus winds blow from this belt from 30° N and S towards the Equator. Because of the rotation of the earth these winds are deflected. According to Farrel's Law these winds turn to their right in the northern hemisphere and in southern hemisphere to the left. In northern hemisphere their direction is North East and in southern hemisphere they blow from South East. These winds are called trade winds.

9. What is meant by roaring forties?

Ans: In the southern hemisphere the absence of major landmasses gives rise to the free flow of winds over the ocean waters. These attain very high speeds between 40° and 50° latitudes and are called roaring forties.

10. Define cyclone.

Ans: In northern hemisphere, the polar front twist and turn in anti-clockwise direction and make a center of low-pressure that is called Cyclone. Cyclone is a line of similar air pressure that is oval or circular in shape with a low pressure in the center.

11. What is meant by anti-cyclone?

Ans: Anti-cyclone is the system of lines joining the areas of low pressures with the maximum pressure in the center.

12. Define sea breeze.

Ans: In coastal areas, the land area gets more heated than water during the day that makes low pressure over the land. Therefore, wind blows from the sea towards land during the day and is called sea breeze.

13. Name any two seasonal winds.

Ans: These are the seasonal winds.

- Land and Sea Breeze
- Monsoons

14.Name the Monsoon regions in the world.

Ans: Monsoon regions in the world are:

- | | | | |
|-----------------|---------------------|---------------------|-----------------------------|
| 1. India | 2. Pakistan | 3. Thailand | 4. Vietnam |
| 5. Laos | 6. Cambodia | 7. Myanmar | 8. Indonesia |
| 9. South China | 10. Central America | 11. Colombia | 12. Venezuela |
| 13. West Indies | 14. Malagasy | 15. North Australia | 16. Coastal Areas of Brazil |

15.Write about mountain and valley winds.

Ans: The mountain and tops of the plateaus are heated more during the day than the valleys. Therefore, the winds blow from the valleys towards the top during the day. At night time, due to the radiation the peaks lose their heat much faster. Therefore, these are colder than the valleys. The cold air being heavy blows down the slope towards the valley. These are mountain and valley breezes.

16.What do you know about local winds?

Ans: There are some winds that influence certain areas. These winds are called local winds. These winds are caused by the difference of temperature and pressure.

17.What do you know about the Simoom?

Ans: This is a dust-laden wind that blows in the Arabian Desert.

18.Define Blizzard.

Ans: This is a very strong and cold storm accompanied by the snowfall. The wind speed sometimes reaches 80 km per hour and temperature drops below 0. The wind is so strong that it lifts up the snow from the ground. This is also called Blinding Storm. It is a special cold wind of Northern USA.

19.Write a note on Mistral.

Ans: This wind blows from north in France and considerably reduces the temperature of Marseilles.

20.Define humidity.

Ans: Humidity is the amount of [water vapor](#) present in the air. Water vapor is the gaseous state of water and is invisible to the human eye.

21. Name the types of humidity.

Ans: These are the types of humidity.

- Absolute Humidity
- Relative Humidity

22. What is meant by saturated air?

Ans: If the humidity is at its maximum level on a particular temperature, the air is called saturated air.

23. Define Dew.

Ans: In the morning we see the water droplets on the grass and trees that is called dew. It does not fall from the atmosphere rather when air that is carrying water vapor touches any cold surface it shrinks and condenses and the water droplets are formed. Dew is formed in autumn in Pakistan. The air is humid and temperature drops at night in these days.

24. Define mist.

Ans: If the temperature near the earth surface is very low and dust particles are abundant the water vapor starts to condense on the dust particles. It seems that the droplets are floating in the air. This phenomenon is called mist.

25. Write a short note on convectional rainfall.

Ans: The cause of this type of the rainfall is the rising of the air when the contact of surface of the earth heats it. When it reaches the colder upper reaches of the atmosphere the water vapor present in air takes the form of small droplets. These small droplets join together to form bigger drops. These big drops cannot be suspended in the air and come down to earth in form of rainfall.

Answer the Following Long Questions

- ❖ Differentiate climate and Weather. Discuss different elements of weather and climate in detail.
- ❖ Discuss the horizontal distribution of temperature on the Earth.
- ❖ Write a descriptive note on the pressure belts of the world.
- ❖ Write a descriptive note on planetary winds/permanent winds (Trade Winds).
- ❖ Narrate the local winds in detail.
- ❖ What are different types of Rainfall? Narrate.

- ❖ Elaborate different types of precipitation.

CHAPTER 9

Circle the correct option.

1. Example of land locked country?
(a) Afghanistan (b) Pakistan (c) Egypt (d) USA
2. Profession of the people living along coastal areas is usually?
(a) Mining (b) Fishing (c) Agriculture (d) Industry
3. Which river is also known as the Gift of Egypt?
(a) Amazon (b) Tigris (c) Euphrates (d) Nile
4. The highly dense areas on the Earth?
(a) Plateaus (b) Mountains (c) Deserts (d) Plains
5. The most developed racial group?
(a) Negroes/Black (b) White (c) Brown (d) Red Indians
6. The most backward race in the world?
(a) Negroes/Black (b) White (c) Brown (d) Red Indians
7. Which religion does not allow to slaughter the animals?
(a) Buddhism (b) Islam (c) Hinduism (d) Christianity

Answer the Following Short Questions.

1. Describe different types of environment.

Ans: The environment is considered to be of two types.

- Physical or Natural Environment
- Non-physical or Social Environment

2. Define natural/physical environment.

Ans: Physical environment includes geographic location, coastlines, the physical features like rivers, mountains, plains and climate.

3. What is meant by location?

Ans: Location means the geographical position of any place. The suitable location in terms of the trade means that there should be easy availability of goods; the transportation network should be adequate. Markets must be located at lesser distance.

4. Name any three landlocked/interior countries.

Ans: Landlocked countries are

- (1) Afghanistan (2) Bolivia (3) Switzerland

5. Write the impacts of rivers.

Ans: The study of old civilizations reveals that the river valleys were the center for the development of major cities and settlements. The rivers are natural means of transportation and also provide better conditions for agriculture. So, for ancient times the valleys of Nile River, Euphrates and Tigris, Ganges and Indus and Hwang Ho have been a hub of human civilization.

6. Write two advantages of rivers.

Ans: Rivers have great advantages for humans that are as follow:

- Rivers are the main source of irrigation that are essential for the agricultural countries.
- Rivers are used for transportation purposes as well in many countries.
- Dams are constructed on rivers to produce electricity.
- Rivers are major source of inland fishing that boosts the economy of any country.

7. Write some advantages of mountains.

Ans: Mountains have many advantages for humans that may be enlisted as below:

- The mountains cause rainfall.
- The mountains are the source of many rivers that are important for any country.
- Pastures and meadows are located on the slopes of the mountains where people earn their livelihood herding.
- The slopes of the mountains are covered with forests that provide raw material for many industries.
- Many mountain ranges have huge mineral deposits.

8. Write two advantages of plains.

Ans: Plains have many advantages. Some of them are as follow:

- Because of the fertile land, agriculture is easy and yield is higher.
- Because of the flat surface roads and railways are easily constructed, there is a dense transport network in Indus and Gangetic plains.
- Because of the flourishing agriculture, many industries are developed that depend upon the raw materials produced by the agriculture sector.
- Internal trade begins with in the dense population areas and if transportation modes are available then it gives rise to international trade.

9. Write four advantages of forests.

Ans: Forests have too many advantages that are enlisted as follow:

- They provide raw material for many industries.
- These are the largest source of wood and timber.
- Forests are the shelter for wildlife and provide them fodder as well.
- They promote tourism. Chitral, Ayubia, Bahawalpur, Changa Manga and Chiltan National Park in Quetta are some of the examples.

10. What is meant by non-physical environment?

Ans: Non-Physical environment means all the elements in our surroundings that are created by human being. That includes race, religious, government and population distribution which affect the economy of a country too much.

11. Write some impacts of non-physical environment.

Ans: It is a fact that race, religious, government and population distribution also affect the economy of a country.

- The white race is very much advanced in industry and trade and is ahead of all other races. After this race comes the yellow race but the black race is the most backward.
- The religious laws and prohibitions also cause hindrance in opting some professions. For example, the Buddhist religion preaches about the safety of the animals and does not allow the slaughtering of the animals.

12. What is the effect of government policies on the trade of a country?

Ans: The good government has a positive impact on the trade. If there is anarchy and unrest in the country the economic conditions become worse and country's resources are not fully utilized.

13. What is the impact of population distribution on economic activities?

Ans: In densely populated regions, most of the people are associated with agriculture and industry. Despite the abundance of mineral deposits some areas do not have industrial development if there is not enough manpower and in sparsely populated areas people are associated with herding.

Answer the Following Long Question

- ❖ How do the mountains affect the human life? Answer in detail.