

## Chapter: 26

## Some Major Ecosystems

## MCQs

1. In temperature grassland the rate of primary production is about :  
 (A) 700-1400 g /m<sup>2</sup> (B) 700-1600 g /m<sup>2</sup> (C) 700-1800 g /m<sup>2</sup> **(D) 700-1500 g /m<sup>2</sup>**
2. Layer is a characteristics of:  
 (A) Tundra (B) Desert (C) Taiga **(D) Grass land**
3. Desert ecosystem occurs in region , where annual rain falls is less than:  
 (A) 250 - 270 cm (B) 15 - 20 cm **(C) 25 - 50 cm** (D) 5 - 10 cm
4. In Sindh , the desert ecosystem is called:  
**(A) Thar** (B) Thal (C) Sahara (D) Gobi
5. Average rain fall in desert ecosystem is:  
 (A) 70 - 80 inch (B) 30 - 40 inches (C) 50 - 60 inch **(D) 10 - 20 inches**
6. In Pakistan the desert ecosystem of western Punjab is:  
 (A) Cholistan (B) Rajistan (C) Thar **(D) Thal**
7. Which biome has been increased in area by human activities?  
**(A) Desert** (B) Coniferous (C) Savanna (D) Grass land
8. The rate of primary production is about 700 - 1500 g / m annually in :  
 (A) Desert (B) Tundra **(C) Temperate grass** (D) glassland
9. Deserts generally occur in region where annual rainfall is less than:  
 (A) 15 - 20 cm (B) 250 - 270 cm **(C) 25 - 50 cm** (D) 5 - 10 cm
10. Cacti and Euphorbia are the desert plants which store water n their:  
**(A) Fleshy stems** (B) Fleshy leaves (C) Fleshy buds (D) Fleshy roots
11. Deserts ecosystem of Mianwali and Bhakkar is called:  
 (A) Cholistan (B) Thar **(C) Thal** (D) Sahara
12. Northern coniferous forests are called as:  
 (A) Boreal (B) Alpine (C) Deciduous **(D) Taiga**
13. The soil or terrestrial ecosystem have same adaptations for animals and plants:  
**(A) Supporting tissues** (B) Nutrients (C) Retention of food (D) Temperature
14. Most plants fit only into a few ecosystem , which type of plants seems in ecosystem of grass land:  
**(A) Perennial herbs** (B) Trees (C) Shrubs (D) Annual weeds
15. Which biome will be with richest soil with nutrients and can be converted into agriculture:  
 (A) Coniferous forest **(B) Deciduous forest**



- ☐ Tropical rain forest
 ☐ Grassland
16. In which type of ecosystem the smallest fraction of nutrients present in soil :  
☐ Savanna
 ☐ Tundra
 ☐ Grassland
 ☒ **Desert**
17. Decomposers and detritus feeders are only living organism :  
☒ **Profundal zone**
☐ Limnetic zone
 ☐ Littoral zone
 ☐ Atmospheric zone
18. The zone where enough light penetrates to support the photosynthesis is :  
☐ Littoral zone
 ☒ **Limnetic zone**
☐ Profundal zone
 ☐ Benthic zone
19. Limnetic phytoplanktons includes the :  
☐ Bacteria
 ☐ Algae
 ☐ Mosses
 ☒ **Cyanobacteria**
20. The light in this zone is insufficient to support photosynthesis :  
☐ Limnetic
 ☒ **Profundal**
☐ Littoral
 ☐ All of these
21. The zone , rich in life , in a fresh water lake is called :  
☐ Desert
 ☐ Profundal zone
 ☒ **Littoral zone**
☐ Limnetic zone
22. Which of the following is drifting animal :  
☐ Insect larvae
 ☐ Snake
 ☐ Turtle
 ☒ **Protozoa**
23. In aquatic ecosystem near shore zone is called:  
☐ Benthic zone
 ☐ Profundal zone
 ☐ Limnetic zone
 ☒ **Littoral zone**
24. A little light is left to power photosynthesis at the depth of :  
☐ 500 feet
 ☐ 1200 feet
 ☐ 1000 feet
 ☒ **600 feet**
25. Phytoplanktons are drifting :  
☐ Crustaceans
 ☐ Protozoa
 ☒ **Plants**
☐ Animals
26. Fresh water ecosystem covers less than :  
☒ **1 %**
☐ 7 %
 ☐ 5 %
 ☐ 3 %
27. The producers in limnetic zone are :  
☐ Amoebae
 ☐ Crustaceans
 ☐ Hydrilla
 ☒ **Cyanobacteria**
28. The average rainfall in temperate deciduous forest is between :  
☐ 600 - 1500 mm
 ☒ **750 - 1500 mm**
☐ 650 - 1500 mm
 ☐ 700 - 1500 mm
29. Temperate deciduous forests are located in Pakistan at :  
☐ Sindh
 ☐ Mianwali
 ☐ Chilas
 ☒ **Shogran**
30. Alpine coniferous forests are found on high :  
☐ Latitudes
 ☒ **Altitudes**
☐ Longitudes
 ☐ Slopes
31. The scientific name of rhesus monkey is :  
☒ **Macaca mullata**
☐ Taxus baccata
 ☐ Felis catus
 ☐ Solenorctor tiberanus



32. A dominant plant of the deciduous forest is the :

- (A) **Taxus baccata** (B) Cactus (C) Euphorbia (D) Acacia

33. Coniferous forests located at high altitude are :

- (A) Arctic (B) Taiga (C) Boreal (D) **Alpine**

34. Which one is not a desert :

- (A) Thal (B) **Taiga** (C) Sahara (D) Thar

35. Northern coniferous forests are called :

- (A) Tundra (B) Alpine (C) Boreal (D) **Taiga**

36. The grass lands of tropical climate have woody trees are called :

- (A) Prieries (B) **Savana** (C) Boreals (D) Tundra

### Fill in the blanks.

1. Water is slower to heat and ..... than air.

2. The distribution of life in lakes depends on access to ..... and to place for attachment.

3. Ecosystem on land is also known as ..... ecosystem.

4. Ecosystem in water is also called as ..... ecosystem

### Answers

|                   |                     |                 |
|-------------------|---------------------|-----------------|
| 1. Slower to cool | 2. Light, nutrients | 3. Lithospheric |
| 4. Hydrospheric   |                     |                 |

## Chapter : 26

## Some Major Ecosystems



### ★ Short Questions Answers ★

1. Can you differentiate between altitude and latitude?

Ans: The angular distance on a meridian(circle passing through poles) north or south of the equator, expressed in degrees and minutes is called latitude. While height in relation to equator is **called** altitude.

2. How many regions open water area is divided into?

Ans: **The open water area is divided into two regions:**

- ❖ The upper Limnetic zone.
- ❖ The lower Profundal zone.

3. What is hydrospheric or aquatic ecosystem?

Ans: Hydrospheric ecosystem is a system in water where living and non-living components exchange material and transfer of energy also takes place within water.

4. What are plankton?

Ans: Living among the anchored plants are microscopic organism **called** plankton. These can be divided into two groups:



- ❖ Phytoplankton: Greek meaning "**drifting plants**". They include photosynthetic protista, bacteria and algae.
- ❖ Zooplankton: Greek meaning "**drifting animals**". Such as protozoa and tiny crustaceans.

5. **What types of organisms are present in profundal zone of lake?**

Ans: Decomposers and detritus feeders such as snails and certain insect larvae, bacteria, fungi and fishes are present in it.

6. **Name the sub-divisions of forest ecosystem.**

Ans: Forest ecosystem is further sub-divided into:

- ❖ Tropical Rain Forests.
- ❖ Temperate Deciduous Forest.
- ❖ Coniferous Alpine and Boreal Forest.

7. **What type of animals are present in temperate deciduous forest.**

Ans: Some very common animals are Macaca mulatta (Rhesus Monkey), Solenorotus tibetanus (black bear), Felis bengalensis (leopard cat), deer, and wolves with various types of micro-organisms to convert the litter into organic matter such as bacteria, fungi and earthworm.

8. **What is the location of coniferous alpine and boreal forests?**

Ans: In Pakistan these forest are in upper Kaghan, Dir and Chilas, Malam Jaba in Swat valley. In world they stretch across Eurasia (Europe + Asia) and North America, Canada just south of the Tundra.

9. **Name some grasslands of Pakistan.**

Ans: Grassland ecosystems are found in Gilgit, Kashmir, Waziristan, lower Chitral and North Kallat.

10. **What is layering in ecosystem?**

Ans: Layering is the characteristics of grassland. Tall grasses from the first layer, mid high grasses from the second layer and third layer is formed by short grasses and forbs and warfare species with mosses and lichens.

11. **Define productivity of an ecosystem.**

Ans: Productivity can be defined as the rate of production of new biomass during the period under consideration. Productivity is generally expressed in terms of grams or kilocalories per sq. meter or hectars per sq. meter per year.

12. **Name three zones in lake ecosystem.**

Ans: **Three zones in lake ecosystem are as under:**

- ❖ **Littoral zone:** Shallow water area.
- ❖ **Limnetic zone:** Open water area with light penetration.
- ❖ **Profundal zone:** Deep, dark water area without light penetration.

13. **How many biomes are present in the world, name only five of them?**

Ans: 10 biomes are present in the world e.g., Tropical rain forest, Tropical deciduous forest, Tropical scrub forest, Savanna, Temperate grassland, Temperate deciduous forest, Desert, Taiga, Tundra and Chaparral.

14. **Give the names of some major ecosystem on land in Pakistan.**

Ans: **Major ecosystems in Pakistan:**

- ❖ Temperate Deciduous forest.



- ❖ Coniferous Alpine and Boreal Forests.
- ❖ Grass land Ecosystem.
- ❖ Desert Ecosystem.
- ❖ Tundra Ecosystem.

15. **Differentiate between weather and climate.**

Ans: Weather refers to short term fluctuations in temperature, humidity, cloud cover, wind and precipitation over periods of hours or days. Climate in contrast refers to overall patterns of weather that prevail from year to year even century to century in a particular region,

16. **What are the four major requirements for life?**

Ans: **Major requirement for life are:**

- ❖ Light.
- ❖ Nutrient.
- ❖ Water.
- ❖ Temperature.
- ❖ Air

17. **What are the characteristics of littoral zone?**

Ans: In this zone the water is shallow, and plants find abundant light, anchorage and adequate nutrients from the bottom sediments.

18. **What is the location temperate deciduous forests in Pakistan and rest of the world.**

Ans: In Pakistan temperate moist conditions are present in Neelum valley and Shogran. These forests originally covered India, Southeast Asia, Eastern North America, Europe, China, Australia, Japan, North and South America.

19. **What is the range of rainfall and temperature in temperate deciduous forest?**

Ans: The average rainfall is between 750-1500 mm. Moderate temperature ranges from 4 degree Celsius to 30 degree Celsius.

20. **Name the plants of temperate deciduous forest?**

Ans: **Some dominant trees are:**

Taxus baccata, Pinus wallichiana, Berberis lyceum usually with height 8 to 30 meters.

21. **What is taiga?**

Ans: Northern coniferous forests are also **called** taiga.

22. **Differentiate between alpine and boreal forests.**

Ans: Coniferous forests located at high altitude are **called** alpine while coniferous forests located at high latitude are **called** boreal forests.

23. **What do you know about the animal life of coniferous alpine and boreal forests?**

Ans: Large mammals, bison, wolf, black bear, deer, Marco polo sheep and smaller animals such as small Kashmir flying squirrel, snowshoe hare, wolverine, and crossbills are present.

24. **Name the plants of coniferous alpine and boreal forests?**

Ans: Plants like Pinus wallichiana, Pinus roxburgii, Abies pindrow, Picea smithiana, Ceders deodara are present.

25. **What are prairies?**



Ans: Grasslands present in temperate climates are called Prairies, such as Prairies of North America, pampas of Argentina. These grasslands do not have woody plants so they are **known** as prairies.

26. **What is Savanna?**

Ans: The grasslands in tropic climates have woody trees and are **called** Savanna.

27. **What is the annual rain fall in grasslands?**

Ans: Annual rainfall is about 250 to 750 mm. The grasslands usually face severe rains, which in tropical and subtropical grasslands, reaches about 1500 mm.

28. **Name some predators of grassland.**

Ans: The predators are reptiles, amphibians and mammals, such as Lizards, toads and turtles prey on insects. Foxes and wolves among mammals are very common.

29. **What is the productivity of grassland ecosystem?**

Ans: In temperate grasslands the rate of primary production is about 700-1500 g/cm<sup>2</sup> annually. In sub humid tropical grasslands it is more than 4000 g/cm<sup>2</sup>.

30. **What is the location of deserts in Pakistan?**

Ans: In Pakistan the desert ecosystems are found in western Punjab where it is known as Thal. In southern Punjab, areas like Fort Abbas. Bahawal Nagar, Yazman Bahawal Pur, Khan pur and Rahim yar khan also have deserts. In Sindh this desert ecosystem is **called** Thar.

31. **What is desertification?**

Ans: While human activities are reducing the extent of many biomes, they are causing the spread of deserts, a process **called** desertification.

32. **What is tundra?**

Ans: It is used to describe types of vegetation in treeless high latitudes between taiga and polar ice caps, and at high altitude across the mountain above timberline such as mountain of Karokaram and Koh Hindukush in Pakistan.

33. **What types of plant life is found in tundra?**

Ans: The ground is carpeted with small perennial flowers and dwarf willows no more than a few centimeters tall often with large lichen called rein deer moss.