

## Ecosystem

Question 1.

Which of the following is considered as pioneer community in xerarch ?

- (a) Annual herbs
- (b) Perennial herbs
- (c) Shrubs
- (d) Lichens

Answer:

- (d) Lichens

Question 2.

Correct sequence of stages of succession on a bare rock is

- (a) Lichens → Mosses → Grasses → Shrubs → Trees
- (b) Trees → Shrubs → Lichens → Mosses → Grasses
- (c) Mosses → Shrubs → Trees → Lichens → Grasses
- (d) Mosses → Lichens → Grasses → Shrubs → Trees.

Answer:

- (a) Lichens → Mosses → Grasses → Shrubs → Trees

Question 3.

In lithosere, foliose lichens make the conditions favourable for the growth of

- (a) crustose lichens
- (b) mosses
- (c) annual grasses
- (d) perennial grasses.

Answer:

- (b) mosses

Question 4.

The correct sequence of plants in a hydrosere is

- (a) Volvox → Hydrilla → Pistia → Scirpus → Carex → Quercus
- (b) Pistia → Volvox → Scirpus → Hydrilla → Quercus → Carex
- (c) Quercus → Carex → Volvox → Hydrilla → Pistia → Scirpus
- (d) Quercus → Carex → Scirpus → Pistia → Hydrilla → Volvox.

Answer:

- (a) Volvox → Hydrilla → Pistia → Scirpus → Carex → Quercus

Question 5.

The second stage of hydrosere is occupied by plants like

- (a) Azolla
- (b) Typha
- (c) Carex
- (d) Vallisneria.

Answer:

- (d) Vallisneria.

Question 6.

An ecosystem which can be easily damaged but can recover after some time if damaging

effect stops, will be having

- (a) low stability and high resilience
- (b) high stability and low resilience
- (c) low stability and low resilience
- (d) high stability and high resilience.

Answer:

- (a) low stability and high resilience

Question 7.

Which one of the following is not a gaseous biogeochemical cycle in ecosystem ?

- (a) Water cycle
- (b) phosphorus cycle
- (c) Nitrogen cycle
- (d) Carbon cycle

Answer:

- (b) phosphorus cycle

Question 8.

The function of reservoir pool is to meet with the deficit of nutrient that occurs due to

- (a) imbalance in rate of efflux and influx of nutrients
- (b) only efflux of nutrients
- (c) ceased nutrient cycle
- (d) none of these.

Answer:

- (a) imbalance in rate of efflux and influx of nutrients

Question 9.

About 71 % of total global carbon is found in

- (a) Oceans
- (b) Forests
- (c) grasslands
- (d) agroecosystems.

Answer:

- (a) Oceans

Question 10.

What percentage of total global carbon is atmospheric carbon ?

- (a) 0.03%
- (b) 1%
- (c) 10%
- (d) 30%

Answer:

- (b) 1%

Question 11.

Climax community is in a state of

- (a) non-equilibrium
- (b) equilibrium
- (c) disorder
- (d) constant change.

Answer:

(b) equilibrium

Question 12.

Among the following biogeochemical cycles, which one does not have losses due to respiration ?

- (a) Phosphorus
- (b) Nitrogen
- (c) Sulphur
- (d) All of the above

Answer:

(d) All of the above

Question 13.

The reservoir for the gaseous type of biogeochemical cycle exists in

- (a) stratosphere
- (b) atmosphere
- (c) ionosphere
- (d) lithosphere.

Answer:

(b) atmosphere

Question 14.

The zone at the edge of a lake or ocean which is alternatively exposed to air and immersed in water is called

- (a) pelagic zone
- (b) benthic zone
- (c) lentic zone
- (d) littoral zone.

Answer:

(d) littoral zone.

Question 15.

Edaphic factor refers to

- (a) water
- (b) soil
- (c) relative humidity
- (d) altitude.

Answer:

(b) soil

Question 16.

Term 'ecosystem' was coined by

- (a) Odum
- (b) Tansley
- (c) Lindeman
- (d) Elton.

Answer:

(b) Tansley

Question 17.

Which of the following pairs is not correct ?

- (a) E. Haeckel – Coined the term 'Ecology'
- (b) Tansley – Coined the term 'Ecosystem'
- (c) R. Mishra – Father of Indian Ecology
- (d) None of these

Answer:

- (d) None of these

Question 18.

Vertical distribution of different species occupying different levels in dense vegetation is called

- (a) stratification
- (b) species composition
- (c) standing crop
- (d) trophic structure

Answer:

- (a) stratification

Question 19.

Which one of the following aspects is not a component of functional unit of ecosystem ?

- (a) Productivity
- (b) Decomposition
- (c) Energy flow
- (d) Ecological pyramids

Answer:

- (d) Ecological pyramids

Question 20.

The movement of energy from lower to higher trophic level is

- (a) always unidirectional
- (b) sometimes unidirectional
- (c) always bidirectional
- (d) undeterminable.

Answer:

- (a) always unidirectional

Question 21.

The rate of conversion of light energy into chemical energy of organic molecules in an ecosystem is

- (a) net primary productivity
- (b) gross primary productivity
- (c) secondary productivity
- (d) gross secondary productivity.

Answer:

- (b) gross primary productivity

Question 22.

The biomass available for consumption by the herbivores and the decomposers is called

- (a) net primary productivity

- (b) secondary productivity
- (c) standing crop
- (d) gross primary productivity

Answer:

- (a) net primary productivity

Question 23.

\_\_\_\_\_ is the rate of production of organic matter by consumers.

- (a) Primary productivity
- (b) Secondary productivity
- (c) Net primary productivity
- (d) Gross primary productivity

Answer:

- (b) Secondary productivity

Question 24.

The rate of formation of new organic matter by rabbit in a grassland, is called

- (a) net productivity
- (b) secondary productivity
- (c) net primary productivity
- (d) gross primary productivity

Answer:

- (b) secondary productivity

Question 25.

Primary productivity depends upon

- (a) light and temperature
- (b) water and nutrients
- (c) photosynthetic capacity of producers
- (d) all of these.

Answer:

- (d) all of these.

Question 26.

Which of the following processes does not contribute to the CO<sub>2</sub> pool in the atmosphere ?

- (a) Respiration by producers
- (b) photosynthesis by producers
- (c) Respiration by consumers
- (d) Decomposition by decomposers

Answer:

- (b) photosynthesis by producers

Question 27.

Major source of sulphur is

- (a) oceans
- (b) land
- (c) rocks
- (d) lakes.

Answer:

- (c) rocks

Question 28.

The ecosystem services include

- (a) maintenance of biodiversity
- (b) pollination of crop
- (c) spiritual, cultural and aesthetic values
- (d) all of these.

Answer:

- (d) all of these.

Question 29.

Out of the total proposed cost of various ecosystem services, cost of climate regulations and habitat for wildlife are

- (a) 50%
- (b) 10%
- (c) 6%
- (d) 25%

Answer:

- (c) 6%

Question 30.

The process of mineralisation by microorganisms helps in the release of

- (a) inorganic nutrients from humus
- (b) both organic and inorganic nutrients from detritus
- (c) organic nutrients from humus
- (d) inorganic nutrients from detritus and formation of humus.

Answer:

- (a) inorganic nutrients from humus

Question 31.

An inverted pyramid of biomass can be found in which ecosystem ?

- (a) Forest
- (b) Marine
- (c) Grassland
- (d) Tundra

Answer:

- (b) Marine

Question 32.

Which of the following is not a producer ?

- (a) Spirogyra
- (b) Agaricus
- (c) Volvox
- (d) Nostoc

Answer:

- (b) Agaricus

Question 33.

Which of the following ecosystems is most productive in terms of net primary production ?

- (a) Deserts
- (b) Tropical rainforests
- (c) Oceans
- (d) Estuaries

Answer:

- (b) Tropical rainforests

Question 34.

Among the following, where do you think the process of decomposition would be the fastest ?

- (a) Tropical rainforest
- (b) Antarctic
- (c) Dry arid region
- (d) Alpine region

Answer:

- (a) Tropical rainforest

Question 35.

During the process of ecological succession, the changes that take place in communities are

- (a) orderly and sequential
- (b) random
- (c) very quick
- (d) not influenced by the physical environment.

Answer:

- (a) orderly and sequential

Question 36.

The annual net primary productivity of the whole biosphere is approximately.

- (a) 150 billion tons
- (b) 160 billion tons
- (c) 170 billion tons
- (d) 180 billion tons.

Answer:

- (c) 170 billion tons

Question 37.

Which one of the following exhibits least productivity ?

- (a) Salty marshes
- (b) Grasslands
- (c) Open oceans
- (d) Coral reefs

Answer:

- (c) Open oceans

Question 38.

Which one of the following is the most productive ecosystem ?

- (a) Temperate forest

- (b) Grassland
- (c) Desert
- (d) Tropical rainforest

Answer:

- (d) Tropical rainforest

Question 39.

During the process of decomposition

- (a)  $\text{CO}_2$  is consumed and  $\text{O}_2$  is released
- (b)  $\text{O}_2$  is consumed and  $\text{CO}_2$  is released
- (c)  $\text{CO}_2$  is consumed and  $\text{H}_2\text{O}$  is released
- (d) none of these.

Answer:

- (b)  $\text{O}_2$  is consumed and  $\text{CO}_2$  is released

Question 40.

Rate of decomposition depends upon

- (a) chemical composition of detritus
- (b) temperature
- (c) soil moisture and soil pH
- (d) all of these.

Answer:

- (d) all of these.

Question 41.

Decomposers are also called as

- (a) transducers
- (b) reducers
- (c) micro-consumers
- (d) both (b) and (c).

Answer:

- (d) both (b) and (c).

Question 42.

The ultimate energy source of all ecosystems is

- (a) producers
- (b) organic molecules
- (c) carbohydrate
- (d) solar radiation.

Answer:

- (d) solar radiation.

Question 43.

Percentage of photosynthetically active radiation (PAR) in the incident solar radiation is

- (a) 1 – 5%
- (b) 2 – 10%
- (c) less than 50%
- (d) approx. 100%



Answer:

(c) less than 50%

Question 44.

Percentage of photosynthetically active radiation (PAR) that is captured by plants in synthesis of organic matter is

- (a) 50 – 70%
- (b) 30 – 40%
- (c) 80 – 100%
- (d) 2 – 10%

Answer:

(d) 2 – 10%

Question 45.

Select the incorrect food chain.

- (a) Grass → Grasshopper → Frog → Snake → Eagle
- (b) Phytoplanktons → Zooplanktons → Small fish → Large fish
- (c) Diatoms → Zooplanktons → Small fish
- (d) Grass → Frog → Vulture

Answer:

(d) Grass → Frog → Vulture

Question 46.

If 10 joules of energy is available at the producer level, then amount of energy present at the level of secondary consumers is

- (a) 10 J
- (b) 1J
- (c) 0.1 J
- (d) 0.01 J.

Answer:

(c) 0.1 J

Question 47.

The energy and biomass relationship between the organisms at different trophic levels can better expressed by

- (a) food chain
- (b) food web
- (c) ecological pyramids
- (d) energy cycle

Answer:

(c) ecological pyramids

Question 48.

Which one of the following animals may occupy more than one trophic levels in the same ecosystem at the same time ?

- (a) Sparrow
- (b) Lion
- (c) Goat
- (d) Frog

Answer:

- (a) Sparrow

Question 49.

Organisms which are associated with first as well as third trophic level are

- (a) macrophytes
- (b) phytoplanktons
- (c) chemoautotrophs
- (d) insectivorous plants.

Answer:

- (d) insectivorous plants.

Question 50.

Mr. X is eating curd/yoghurt. For this food intake in a food chain he should be considered as occupying

- (a) First trophic level
- (b) second trophic level
- (c) third trophic level
- (d) fourth trophic level

Answer:

- (c) third trophic level

Question 51.

Primary succession occurs on

- (a) area destroyed due to forest fire
- (b) newly formed river delta
- (c) harvested crop field
- (d) all of these.

Answer:

- (b) newly formed river delta

Question 52.

Successions that occur on soils or areas which have recently lost their community are referred to as

- (a) primary successions
- (b) secondary successions
- (c) lithoseres
- (d) priseres.

Answer:

- (b) secondary successions

Question 53.

Which one of the following statements is correct for secondary succession ?

- (a) It begins on a bare rock.
- (b) It occurs on a deforested site.
- (c) It follows primary succession.
- (d) It is similar to primary succession except that primary succession has a relatively fast pace.

Answer:

- (b) It occurs on a deforested site.

Question 54.

The rate of secondary succession is faster than primary succession because

- (a) soil or sediment is already present
- (b) water is available in large quantity
- (c) climax community is already present
- (d) pH of soil is favourable.

Answer:

- (d) pH of soil is favourable.

Question 55.

As the succession proceeds number and types of \_\_\_\_\_ change.

- (a) vegetation
- (b) animals
- (c) vegetation and animals
- (d) vegetation, animals and decomposers

Answer:

- (d) vegetation, animals and decomposers