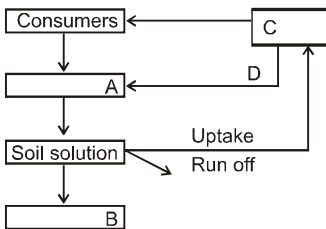


- Maximum biomass of autotrophs in oceans is made up of
 - Benthic brown algae, coastal red algae and daphnids
 - Benthic diatoms and marine viruses
 - Sea grasses and slime moulds
 - Free floating microalgae, cyanobacteria and nanoplankton
- Which of the following is not used for construction of ecological pyramids
 - Fresh weight
 - Dry weight
 - Number of individuals
 - Rate of energy flow
- The biomass available for consumption by the herbivores and the decomposers is called
 - Secondary productivity
 - Standing crop
 - Gross primary productivity
 - Net primary productivity
- Both, hydrarch and xerarch successions lead to:
 - Medium water conditions
 - Xeric conditions
 - Highly dry conditions
 - Excessive wet conditions
- Which one of the following is not a functional unit of an ecosystem
 - Energy flow
 - Decomposition
 - Productivity
 - Stratification
- The second stage of hydrosere is occupied by plants like :
 - Azolla
 - Typha
 - Salix
 - Vallisneria
- Given below is a simplified model of phosphorus cycling in a terrestrial ecosystem with four blanks (A-D). Identify the blanks.



Options :

| | A | B | C | D |
|-----|---------------|---------------|---------------|-------------|
| (a) | Rock minerals | Detritus | Litter fall | Producers |
| (b) | Litter | Producers | Rock minerals | Detritus |
| (c) | Detritus | Rock minerals | Producer | Litter fall |
| (d) | Producers | Litter fall | Rock minerals | Detritus |

(a)

(b)

(c)

(d)

8. Secondary Succession takes place on/in:

- (a) Degraded forest
- (b) Newly created pond
- (c) Newly cooled lava
- (d) Bare rock

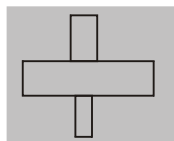
9. Which ecosystem has the maximum biomass

- (a) Forest ecosystem
- (b) Grassland ecosystem
- (c) Pond ecosystem
- (d) Lake ecosystem

10. Which of the following' ecological pyramids is generally inverted?

- (a) Pyramid of biomass in a sea
- (b) Pyramid of numbers in grassland
- (c) Pyramid of energy
- (d) Pyramid of biomass in a forest.

11. The accompanying figure represents an ecological pyramid. It is



- (a) Pyramid of numbers in grassland
- (b) Pyramid of biomass in fallow land
- (c) Pyramid of biomass in lake
- (d) Energy pyramid in a spring

12. Full form of GFC is :

- (a) Grazing food chain
- (b) Grazing fish chain
- (c) Gross food chain
- (d) Green forest conservation

13. Decomposers are

- (a) Autotrophs
- (b) Heterotrophs
- (c) Organotrophs
- (d) Autoheterotrophs

14. Energy flow and energy transformations in living systems strictly conform to the

- (a) Law of limiting factors
- (b) Liebig's law of minimum
- (c) Laws of thermodynamics
- (d) Shelford's law of tolerance
- (e) Biogenetic law

15. The term ecosystem was coined by

- (a) E. Haeckel
- (b) E. Warming
- (c) E.P. Odum
- (d) A. G. Tansley. (NEET-I 2016)

16. Which one of the following ecosystem types has the highest annual net primary productivity?

- (a) Tropical deciduous forest

- (b) Temperate evergreen forest
- (c) Temperate deciduous forest
- (d) Tropical rainforest (2007)

17. Plant decomposers are

- (a) monera and fungi
- (b) fungi and plants
- (c) protista and animalia
- (d) animalia and monera. (2001)

18. When man eats fish which feeds on zooplanktons which have eaten small plants, the producer in this chain is

- (a) small plants
- (b) fish
- (c) man
- (d) zooplankton. (Karnataka NEET 2013)

19. Energy transfer from one trophic level to other, in a food chain, is

- (a) 10%
- (b) 20%
- (c) 1%
- (d) 2%. (1999)

20. In an ecosystem, which one shows one-way passage?

- (a) Free energy
- (b) Carbon
- (c) Nitrogen
- (d) Potassium (1988)

21. Which one of the following statements for the pyramid of energy is incorrect ?

- (a) Its base is broad.
- (b) It shows energy content of different trophic level organisms.
- (c) It is inverted in shape.
- (d) It is upright in shape. (2011)

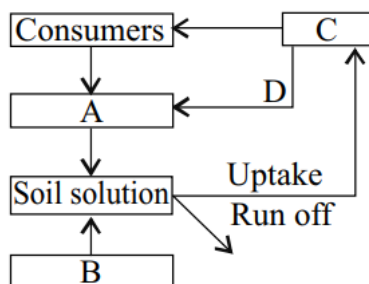
22. Which of the following would appear as the pioneer organisms on bare rocks?

- (a) Mosses
- (b) Green algae
- (c) Lichens
- (d) Liverworts (NEET-I 2016)

23. Both hydrarch and xerarch successions lead to

- (a) medium water conditions
- (b) xeric conditions
- (c) highly dry conditions
- (d) excessive wet conditions. (Mains 2011)

24. Given below is a simplified model of phosphorus cycling in a terrestrial ecosystem with four blanks (A-D). Identify the blanks.



| A | B | C | D |
|-------------------|---------------|---------------|-------------|
| (a) Rock minerals | Detritus | Litter fall | Producers |
| (b) Litter fall | Producers | Rock minerals | Detritus |
| (c) Detritus | Rock minerals | Producers | Litter fall |
| (d) Producers | Litter fall | Rock minerals | Detritus |

(2014)

25. Match the following and select the correct option.

| | |
|----------------------|---------------------|
| A. Earthworm | (i) Pioneer species |
| B. Succession | (ii) Detritivore |
| C. Ecosystem service | (iii) Nataly |
| D. Population growth | (iv) Pollination |

| | A | B | C | D |
|-----|-------|------|-------|-------|
| (a) | (i) | (ii) | (iii) | (iv) |
| (b) | (iv) | (i) | (iii) | (ii) |
| (c) | (iii) | (ii) | (iv) | (i) |
| (d) | (ii) | (i) | (iv) | (iii) |

(2014)

26. World Ozone Day is celebrated on

- (a) 5th June
- (b) 21st April
- (c) 16th September
- (d) 22nd April

27. Which one of the following population interactions is widely used in medical science for the production of antibiotics?

- (a) Commensalism
- (b) Mutualism
- (c) Parasitism
- (d) Amensalism

28. All the following pollutants are removed by ESP (Electro Static Precipitator) and spray of lime except: -

- (a) More than 99% of particulate matter
- (b) SO₂
- (c) Oxides of nitrogen
- (d) Vapour of Hg

29. Select the correct match: -

| Column-I | Column-II |
|------------------------------|--------------|
| i both are benefited | Aammensalism |
| ii one benefited, one harmed | B parasitism |

| | |
|----------------------------------|----------------|
| iii one unaffected, one harmed | C mutualism |
| iv one unaffected, one benefited | D commensalism |

| | i | ii | iii | iv |
|-----|---|----|-----|----|
| (a) | C | B | A | D |
| (b) | A | B | C | D |
| (c) | D | C | B | A |
| (d) | B | A | D | C |

30. Eutrophication of water body leads to death of aquatic fishes due to decline in : -

- (a) Oxygen
- (b) Nutrients and minerals
- (c) Light
- (d) Food

1. (d)
2. (d)
3. (d)
4. (a)
5. (d)
6. (d)
7. (c)
8. (a)
9. (a)
10. (a)
11. (c)
12. (a)
13. (b)
14. (c) In ecosystem energy transfers from one form to another and some energy loss in the form of heat, it follows the IInd law of thermodynamics.
15. (d) : The term ecosystem was coined by A.G. Tansley in 1935.
16. (d) : Net primary productivity is the total organic matter stored by producers per unit area per unit time. Gross primary productivity is the total organic matter synthesised by producers in the process of photosynthesis per unit area per unit time. So, Net primary productivity = Gross productivity – Respiration and other losses Tropical rainforests occur over equatorial/subequatorial regions with abundant warmth and rainfall. Diversity and productivity are maximum as compared to other regions.
17. (a) : Microorganisms (bacteria and fungi) are decomposers of the ecosystem. They feed upon dead decaying living organisms (both plant and animals) and break them into simpler compounds. These are released free in the atmosphere and are utilized by producers for the synthesis of their food materials. They mainly belong to Kingdom Monera and Fungi.
18. (a) : The transfer of food energy from producers to consumers through a series of organisms with repeated eating and being eaten is known as food chain. Green plants are always the first link of food chain because they alone are capable of synthesising organic food by using light energy by photosynthesis. The logical sequence of a food chain is : Producer → Consumers → Decomposer (Primary producer) (Primary consumer) (Secondary consumer) (Tertiary consumer)
19. (a) : Herbivores are eaten by primary carnivores. Only 10% of the herbivores productivity is utilized for raising productivity of primary carnivores. The rest is consumed in ingestion, respiration, maintenance of body heat and other activities. Higher carnivores similarly are able to retain only 10% of energy present in primary carnivores. It is called 10% law which was proposed by Lindemann. Accordingly, if plant trapped 20 J of energy, mice will have 2 J, snake will have 0.2 J and hence, peacock will have 0.02 J of energy.
20. (a) : The behaviour of energy in ecosystem can be termed energy flow due to unidirectional flow of energy. Flow of energy is only in one direction i.e., from solar radiation → producers → herbivores →carnivores. This energy cannot pass in the reverse direction. There is decrease in the content and flow of energy with rise in trophic level.
21. (c) : Pyramid of energy is always upright, can never be inverted, because when energy flows from a particular trophic level to the next trophic level, some energy is always lost as heat at each step.
22. (c) : The bare rocky habitat is extremely hostile to living beings. There is no water, as the substratum does not absorb rain water. There is no nutrient holding mechanism. Plants cannot grow on these rocks. The first inhabitants or pioneers of such a habitat are usually lichens as they are resistant to desiccation and extreme temperature.
23. (a) :Hydrarch succession takes place in wetter areas and the successional series progress from hydric to the mesic condition . Xerarch succession takes place in dry areas and the series progress from xeric to mesic condition. Hence, both hydrarch and xerarch succession leads to medium water conditions (mesic).

24. (c)

25. (d)

26. (c)

27. (d)

28. (d)

29. (a)

30. (a)