



BIOLOGY

NEET & AIIMS

ECOSYSTEM

Example

1. Which is global ecosystem ? To make its study easier it is divided into how many categories ? -



Watch Video Solution

2. How many main groups are categorized under biotic components of ecosystem ? Mention their names.



[Watch Video Solution](#)

3. Mention two important structural features of ecosystem .



[Watch Video Solution](#)

4. How many most important functional aspects of ecosystem are there ? Whiche one is associated with rate of biomass production ?



[Watch Video Solution](#)

5. Mention the raw material of decomposition. Which step of decomposition is performed by detrivores ?



[Watch Video Solution](#)

6. Energy of sunlight is fixed by green plants and trapped in $C - C$ bond of sugars through process of photosynthesis. This explains which law of thermodynamics ?



[Watch Video Solution](#)

7. What type of food chain it is ?

Grass \rightarrow Rabbit \rightarrow Wolf \rightarrow Tiger.



[Watch Video Solution](#)

8. What is the trophic level of rabbit ?



[Watch Video Solution](#)

9. Mention the trophic level of primary carnivore.



[Watch Video Solution](#)

10. How does food web provide stability to ecosystem ?



[Watch Video Solution](#)

11. How many ecological parameters are mainly used for preparing ecological pyramids ? What does base of pyramid represent ?



Watch Video Solution

12. What is sere ? It constitutes how many types of communities .



Watch Video Solution

13. Answer appropriately as per the same given below :

Lichens → Herbs → Shrubs → Forest.

(i) Mention the name of missing seral stage.

(ii) What type of environment conditions occurs in climax community ?



Watch Video Solution

Try Yourself

1. Ecosystem forest , Grassland , Estuaries , Pond
Lake Wetland.

From the above given options how many can be
categorised into terrestrial and aquatic ecosystem
respectively ?



[Watch Video Solution](#)

2. Ecosystem forest , Grassland , Estuaries , Pond
Lake Wetland.

Amongst these which is smallest ecosystem ?



[Watch Video Solution](#)

3. Mention name of major producers in terrestrial ecosystem



[Watch Video Solution](#)

4. Chief producer in aquatic ecosystem is _____



[Watch Video Solution](#)

5. Which biotic component is involved in maintaining soil fertility ?



[Watch Video Solution](#)

 [Watch Video Solution](#)

6. Choose odd one out w.r.t. consumers

Insects Chemosynthetic bacteria Tadpole



[Watch Video Solution](#)

7. Vertical stratification is more diverse in grassland than desert ecosystem.



[Watch Video Solution](#)

8. Maximum species diversity is associated with tropical rain forest.



[Watch Video Solution](#)

9. Rate at which sunlight is captured by autotrophs represents



[Watch Video Solution](#)

10. Global area occupied by oceans is _____ but productivity contributions is _____



[Watch Video Solution](#)

11. Only biotic factors affect the magnitude of primary productivity.



[Watch Video Solution](#)

12. Value of net primary productivity is considerably higher than gross primary productivity.



[Watch Video Solution](#)

13. Which of the following terms are not associated with humus ?

Amorphous light coloured. Acidic , Colloidal Labile, Reservoir of nutrients.



Watch Video Solution

14. Mention the name of two major decomposers.



Watch Video Solution

15. How many among the factors given below result in piling up of organic matter ?

Warm environment , Anaerobic condition, Low moisture $< 10^{\circ}C$ temperature.



[Watch Video Solution](#)

16. Rate of decomposition is controlled by climatic factors only.



[Watch Video Solution](#)

17. Energy transfer is cyclic



[Watch Video Solution](#)

18. Value of PAR is $> 50\%$ of solar radiation



Watch Video Solution

19. Exception to source of energy is hydrothermal ecosystem.



Watch Video Solution

20. Given a scheme or flow chart responding flow of energy in an ecosystem.



Watch Video Solution

21. What constitute food for detrivores ?



[Watch Video Solution](#)

22. Mention the trophic level of organism given below.

A. Fruit eating birds

B. Zooplanktons

C. Grasses

D. Chemosynthetic bacteria .

Answer:



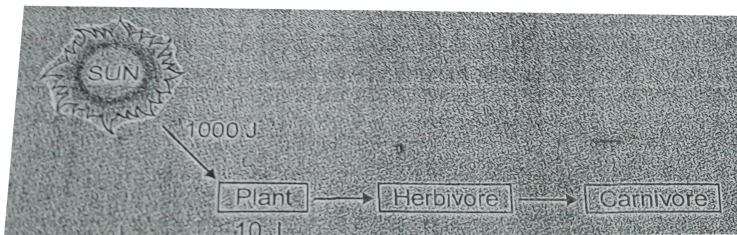
Watch Video Solution

23. Mention names of two omnivores



Watch Video Solution

24. What is the magnitude of energy at T_2 and T_3 level in the given figure ?





[Watch Video Solution](#)

25. Pyramid of biomass is always upright.



[Watch Video Solution](#)

26. Upright pyramid can be seen for all the ecological parameters in grassland ecosystem.



[Watch Video Solution](#)

27. 10 % law of Lindeman justify upright shape of pyramid of energy.



Watch Video Solution

28. Climax community exhibits high species diversity.



Watch Video Solution

29. Succession and evolution had occurred simultaneously.



[Watch Video Solution](#)

30. Choose the correct match.

- | | |
|---------------------------|---------------------------|
| (i) Primary succession | (a) Fast |
| (ii) secondary succession | (b) Cooled volcanic lava |
| | (c) Slow |
| | (d) A abandoned farm land |



[Watch Video Solution](#)

31. Lichen secretes weak acids



[Watch Video Solution](#)

32. Pioneer community in newly formed pond in plankton stage.



Watch Video Solution

33. In Hydrarch succession scrub stage is preceded by forest community.



Watch Video Solution

34. Climatic factors govern or decide type of community in secondary succession.



[Watch Video Solution](#)

35. Mention name of two elements where reservoir pool is lithosphere.



[Watch Video Solution](#)

36. Major reservoir of carbon is _____



[Watch Video Solution](#)

37. Maximum price tag is for _____ (ecosystem service).



Watch Video Solution

38. Mention name of ecosystem service which is involved in sexual reproduction of plants.



Watch Video Solution

Exercise

1. Which of the following ecosystem lacks one or more structural component(s) ?

A. Deep sea

B. Freshly formed rain water pond

C. Forest ecosystem

D. More than one option is correct.

Answer: D



Watch Video Solution

2. Artificial ecosystems are characterised by

- A. High productivity
- B. High diversity
- C. Complex food chains
- D. more cycling of nutrients

Answer: A



Watch Video Solution

3. Boundaries between one ecosystem and another are indistinct and overlapping therefore all ecosystem on the earth are joined together to form a single global ecosystem known as

A. population

B. Species

C. Biosphere

D. Community

Answer: C



Watch Video Solution

4. Primary productivity is expressed in terms of

A. $(Kcal\ m^{-2})\ yr^{-1}$

B. $\frac{Kcal \times yr}{m^2}$

C. yr / gm^2

D. $\frac{Kcal}{m^2}$

Answer: A



Watch Video Solution

5. Which of the following ecosystem can be included in least productive category ?

- A. Coral reef
- B. Desert
- C. Tropical rain forest
- D. Sugarcane field

Answer: B



Watch Video Solution

6. Rate of organic matter stored by producers in their bodies per unit time and area is called as

A. GPP

B. NPP

C. Secondary productivity

D. Ecological efficiency

Answer: A



Watch Video Solution

7. Mark the incorrect match

- A. Primary productivity - Varies in different types of ecosystem
- B. GPP-Available biomass for the consumption to herbivores
- C. 55 billion tons - Annual NPP of oceans
- D. Secondary productivity -Rate of formation of new organic matter by consumers

Answer: B



Watch Video Solution

8. Which of the following statement about decomposition is incorrect ?

A. Decomposers break down complex organic matter into inorganic substances

B. Water insoluble organic nutrients go down into the soil horizon during the process of leaching

C. In fragmentation , detrivores break down detritus into smaller particles

D. Saprophytic bacteria and fungi secrete digestive enzymes over the fragmented detritus

Answer: B



Watch Video Solution

9. Mark the odd one w.r.t. humus

A. Slightly acidic

B. Colloidal in nature

C. Undergoes decomposition at every fast rate

D. Serves as a reservoir of nutrients

Answer: C



Watch Video Solution

10. Most important climatic factors that regulate the rate of decomposition are

A. Temperature and soil moisture

B. Soil pH and aeration

C. Aeration and temperature

D. Moisture and Soil pH

Answer: A



Watch Video Solution

11. What percentage of incident solar radiatin is captured in photosynthesis by plants ?

A. 0.8 – 4 %

B. 0.2 – 1 %

C. 1 – 5 %

D. 50 %

Answer: C



[Watch Video Solution](#)

12. Mark the odd one (w.r.t.second trophic level)

A. Wolf

B. Grasshopper

C. Cow

D. Zooplanktons

Answer: A



[Watch Video Solution](#)

13. Which of the following statement about GFC is incorrect ?

A. Sun is the source of energy

B. Begins with consumers

C. Major conduit for energy flow in aquatic ecosystems

D. Size of organisms commonly increase at higher trophic levles.

Answer: B



Watch Video Solution

14. Amount of living material present in different trophic levels at a given time is called .

A. Standing quality

B. Standing state

C. GPP

D. Standing crop

Answer: D



Watch Video Solution

15. For tree and grassland ecosystems, pyramid of biomass is

- A. Upright
- B. Inverted
- C. Spindle -shaped
- D. Urn-shaped

Answer: A



Watch Video Solution

16. Succession stage that occurs on a bare rock is called

A. Hydrach

B. Halosere

C. Lithosere

D. Hydrosere

Answer: C



Watch Video Solution

17. During the process of ecological succession

- A. Species diversity decreases
- B. Structural complexity decreases
- C. Niche become specilised
- D. Food chain relationship becomes simple

Answer: C



Watch Video Solution

18. What amount of carbon is fixed in the biosphere through photosynthesis annually ?

A. $4 \times 10^{13} g$

B. $3 \times 10^4 kg$

C. $10^4 kg$

D. $4 \times 10^{13} kg$

Answer: D



Watch Video Solution

19. Phosphorus is major component of

- A. Biological membranes
- B. Nucleic acids
- C. Cellular energy transfer system
- D. All of these

Answer: D



Watch Video Solution

20. Resarchers like Robert Constanza et.al.,have put an average price tag of US \$.....trillion a year on the fundamental ecological services.

A. 33

B. 50

C. 6

D. 10

Answer: A



Watch Video Solution

Assignment Section A

1. Which of the following represents largest man made ecosystem ?

A. Zoo

B. Garden

C. Aquarium

D. Agroecosystem

Answer: A



Watch Video Solution

2. Rate of production of organic matter by producers per unit time and area is

A. GPP

B. NPP

C. NPP-R

D. More than one option is correct.

Answer: D



Watch Video Solution

3. Magnitude of primary productivity is affected by

A. Temperature , Availability of nutrients

B. Solar radiations available, Availability of
nutrients

C. Photosynthetic capacity of producers

D. All of these

Answer: C



Watch Video Solution

4. Buildup of organic material in soil is under which of the following conditions to

A. $< 10^{\circ}C$ temperature , Absence of oxygen

B. Warm temperature, Humid environment

C. Aerobic conditions , $> 25^{\circ}C$ temperautre

D. Nitrogen rich detritus, optimum moisture

Answer: C



Watch Video Solution

5. Humification results in the formation of _____ substance.

- A. Colloidal , Basic
- B. Acidic ,light coloured
- C. Amorphous,dark coloured
- D. Light coloured, Colloidal

Answer: D



Watch Video Solution

6. What percentages of PAR can be captured by plants ?

A. 1 – 5 %

B. 2 – 10 %

C. 20 %

D. 50 %

Answer: C



Watch Video Solution

7. Trees → Birds → Lice → Bacteria Above
food chain is

A. Predatory

B. Grazing

C. Detritus

D. Parasitic

Answer: C



Watch Video Solution

8. Choose incorrect option w.r.t. amount of living material present in different trophic levels at a given time

- A. Can be measured as number
- B. Is equivalent to standing crop
- C. Is always represented as dry weight only
- D. Expressed both as biomass and number

Answer: B



Watch Video Solution

9. if 10,000 J of energy fall on piece of land , then what is enenergy at T_2 levels ?

A. 1000 J

B. 10 J

C. 100 J

D. 1 J

Answer: A



Watch Video Solution

10. Choose odd one out w.r.t. functional aspects of ecosystem.

- A. Energy flow
- B. Decomposition
- C. Species composition
- D. Nutrient cycling

Answer: c



Watch Video Solution

11. Major conduit of energy in land and aquatic ecosystem is transferred through _____ and _____ respectively.

A. GFC,DFC

B. PFC,GFC

C. DFC,GFC

D. GFC,GFC

Answer: C



Watch Video Solution

12. In hydrarch succession , reed swamp stage is preceded by

- A. Forest community
- B. Scrub stage
- C. Sedge meadow stage
- D. Floating stage

Answer: C



Watch Video Solution

13. Ecological succession is _____ and _____ change in species composition.

- A. Orderly and sequential
- B. predictable and orderly
- C. Gradual and unsequential
- D. Sequential and disorderly

Answer: B



Watch Video Solution

14. Pioneer community established on a bare rock is

A. Mosses

B. Lichens

C. Phytoplanktons

D. Higher plants

Answer: B



Watch Video Solution

15. Succession proceeds from

A. Xeric → Mesic conditions

B. Hydric → Mesic conditions

C. Mesic → Xeric conditions

D. More than one option is correct.

Answer: B



Watch Video Solution

16. Carbon constitutes _____ of dry weight of organism and _____ percentage is dissolved in oceans out of total global carbon.

A. 49 % , 71 %

B. 71 % , 49 %

C. 49 % , 49 %

D. 71 % , 71 %

Answer: B



Watch Video Solution

17. Choose incorrect option for the cost distribution of ecosystem services.

A. Soil formation – 50 %

B. Nutrient cycling 10 %

C. Climate regulation – 6 %

D. Habitat for wilidlife – 6 %

Answer: C



Watch Video Solution

18. Choose the correct change during ecological succession.

- A. Total biomass decreases
- B. Decomposers also change.
- C. Low degree of diversity
- D. Humus content decreases

Answer: C



Watch Video Solution

19. The most common shape of pyramid of number is

A. Inverted

B. Umed

C. Spindle

D. Upright

Answer: D



Watch Video Solution

20. Which of the following organisms convert plant matter into animal matter ?

A. Earthworm

B. Goat

C. Termites

D. Frog

Answer: A



Watch Video Solution

21. Productivity contributed by oceans is _____ but area coverage is comparatively _____

A. High , less

B. Low , more

C. 10, 71 %

D. 50 % , 71 %

Answer: A



Watch Video Solution

22. Mineralisation is performed by

A. Small carnivores

B. Detrivores

C. Sapprophytic bacteria and fungi

D. Earthworm , termites

Answer: C



Watch Video Solution

23. To make the study of global ecosystem easier, it is broadly into how many basic categories ?

A. Three

B. Two

C. Four

D. Five

Answer: D



Watch Video Solution

24. Major site of decomposition in the soil and water bodies respectively is

- A. Bottom and upper layer
- B. Upper and bottom layer
- C. Upper and top layer
- D. Bottom and top layer

Answer: B



Watch Video Solution

25. Raw material for decomposition represented by dead organic matter is

- A. Detritus
- B. Only roots
- C. Minerals
- D. Humus

Answer: B



Watch Video Solution

26. Which of the following trophic levels are occupied by sparrow ?

- A. Primary consumer, primary producer
- B. Secondary consumer , top carnivore
- C. Primary producer, secondary consumer
- D. Primary consumer, secondary consumer.

Answer: D



Watch Video Solution

27. Amount of inorganic substances present in an ecosystem is _____. Energy flow is a _____ feature of ecosystem.

- A. Standing crop , structural
- B. Standing state, functional
- C. Standing crop , functional
- D. Standing state , structural

Answer: C



Watch Video Solution

28. Initial serial stages in succession

- A. Possess low diversity
- B. Have higher biomass
- C. More numerous in secondary succession
- D. Show maximum niche specialisation.

Answer: D



Watch Video Solution

29. Choose odd one out w.r.t. gaseous cycle.

A. Carbon

B. Hydrogen

C. Nitrogen

D. Phosphorus

Answer: B



Watch Video Solution

30. Area where succession can take several thousands years to reach climax community is

A. Burnt and cut forest

B. Sand dunes

C. Flooded land

D. Abandonend farm lands

Answer: D



Watch Video Solution

31. Major utilisation of carbon from atmosphere is through

A. Decomposition

B. Photosynthesis

C. Respiration

D. Human activities

Answer: B



Watch Video Solution

32. According to Robert Constanza average price tag for ecosystem services is

A. US \$ 18 trillion

B. US \$ 33 trillion

C. US \$ 180 trillion

D. US \$ 13 trillion

Answer: C



Watch Video Solution

33. Which of the following organisms were not given any place in ecological pyramids ?

A. Working at several trophic levels

B. Decomposers

C. Parasites

D. More than one option is correct.

Answer: B



Watch Video Solution

34. Choose the correct sequence of transitional communities in Xerach succession.

A. Mosses → Lichens → Grasses

B. Bryophytes → Forest → Shrubs

C. Bryophytes → Herbs → Shrubs

D. Lichens → Mosses → Herbs

Answer: B



Watch Video Solution

35. Which of the following food chain shows spindle

A. Grass → Insects → Frog

B. Phytoplankton → Zooplankton → Small
fish

C. Tree → Birds → Hawks

D. Tree → Birds → Insects → Bacteria

Answer: B





Watch Video Solution

Assignment Section B

1. Which is not true regarding ecosystem?

A. Self sufficient unit

B. Cyclic exchange of materials between living beings and environment

C. Only requirement is input of energy

D. Characterized by a major vegetation type

Answer: D



[Watch Video Solution](#)

2. An ecosystem contains

- A. Green plants and animals
- B. Green plants and decomposers
- C. Green plants , animals , decomposers and abiotic environment
- D. Producers and consumers

Answer: B



[Watch Video Solution](#)

3. Which of the following are artificial aquatic ecosystems ?

A. Large dams and reserviors

B. Lakes and canals

C. Fishery tanks and Aquaria

D. All of these

Answer: C



Watch Video Solution

4. Which is not a structural aspect of ecosystem?

A. Productivity

B. Species composition

C. Diversity

D. Life cycle

Answer: C



Watch Video Solution

5. Which of the following is a functional aspect of an ecosystem?

A. Species composition

B. Inorganic nutrients

C. Homeostasis

D. Topography

Answer: B



Watch Video Solution

6. Which of the following ecosystem has highest productivity ?

- A. Tropical deciduous forest
- B. Temperature coniferous forest
- C. Tropical rain forest
- D. Desert shrub

Answer: B



Watch Video Solution

7. For net primary productivity energy captured is

- A. 1 – 5 % of incident radiation
- B. 2 – 5 % of PAR
- C. 0.8 – 4 % of incident radiation
- D. 2 – 10 % of PAR

Answer: B



Watch Video Solution

8. Stratification is well developed in

A. Tropical rain forests

B. Grasslands

C. Alpine vegetations

D. Temperate forests

Answer: C



Watch Video Solution

9. Consider the following four statements (A-D) and select the correct option stating which ones are true (T) and which ones are False (F).

(A) Vertical distribution of different species

occupying different levels in a community is called stratification.

(B) Net primary productivity minus respiration losses is the gross primary productivity.

(C) Rate of biomass production is called decomposition.

(D) Annual net primary productivity of oceans is 55 billion tons.

A. (A) (B) (C) (D)
(1) *F* *T* *F* *T*

B. (A) (B) (C) (D)
(2) *T* *F* *T* *F*

C. (A) (B) (C) (D)
(3) *T* *F* *F* *T*

D. (A) (B) (C) (D)
(4) *F* *T* *F* *F*

Answer: A



Watch Video Solution

10. Which of the following phenomena does not play a significant role in the maintenance of homeostasis

A. Carrying capacity

B. Biotic potential

C. Self regulation

D. Feed back

Answer: B



Watch Video Solution

11. Least productive ecosystem is

A. Grassland

B. Savannah

C. Forest

D. Tundra

Answer: D



Watch Video Solution

12. Which of the following are called key industry animals?

- A. Autotrophs
- B. Decomposers
- C. Herbivores
- D. Top carnivores

Answer: B



Watch Video Solution

13. Find and incorrect statement of DFC

- A. Starts with solar energy
- B. Terminates in GFC
- C. Requires specific detritivores
- D. Plays major role in terrestrial systems

Answer: B



Watch Video Solution

14. In tropical rain forest, most of the energy in ecosystem flows through

A. Grazing food chain

B. Detritus food chain

C. Parasitic food chain

D. Both (1) & (3)

Answer: A



Watch Video Solution

15. The respiratory losses of producers, herbivores and carnivores are, respectively,

A. 10 % , 20 % , 30 %

B. 20 % , 30 % , 60 %

C. 20 % , 40 % , 80 %

D. Always 10 %

Answer: C



Watch Video Solution

16. Which of the following ecological pyramids is the most representative of the functional characteristics of an ecosystem?

A. Pyramid of number

- B. Pyramid of biomass
- C. Pyramid of energy
- D. All are equally representative

Answer: C



Watch Video Solution

17. Which is not true for humus?

- A. Dark coloured amorphous substance
- B. Highly resistant to microbial action

- C. Act as reservoir of nutrients and increases water holding capacity of soil
- D. They are degradation product of protein and fats and are produced by the process of mineralisation.

Answer: A



Watch Video Solution

18. Nutrient immobilisation

- A. Prevents leaching of nutrients

B. Is incorporation of nutrients in microbes

C. Is covalent linking of nutrients with one another

D. More than one option is correct.

Answer: D



Watch Video Solution

19. If producer is a large tree that supports a number of herbivorous animals which are further attacked by ectoparasites, the pyramid of number shall be

A. Inverted

B. Upright

C. Irregular

D. Spindle shaped

Answer: B



Watch Video Solution

20. A food web

A. Increases variety of food at each trophic level

B. Delicately balances the inter relations amongst organisms

C. Decreases variety of food but increases quantity of food at each trophic level

D. Increases variety as well as quantity of food at each trophic level

Answer: A



Watch Video Solution

21. Earth is. a/an

- A. Open system
- B. Closed system
- C. Both (1) and (2)
- D. None of these

Answer: B



Watch Video Solution

22. Energy requirement for the maintenance of body with successively higher trophic level

- A. Decreases

B. Increases

C. Remain same

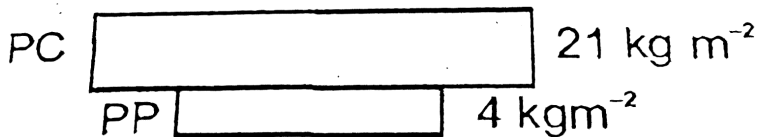
D. Always 10 %

Answer: B



Watch Video Solution

23. What does the given ecological pyramid represent ?



- A. inverted pyramid of number in pond
- B. Role of decomposers
- C. Inverted pyramid of biomass in pond
- D. Pyramid of biomass in a forest ecosystem

Answer: B



Watch Video Solution

24. Mark the correct match

- A. Secondary consumer- Zooplankton
- B. Primary coloniser - Viruses

C. Nanoecosystem- Valley and forest

D. Omnivores - Cockroaches, Crows

Answer: D



Watch Video Solution

25. Grazing food chain

A. Provides inorganic matter to detritus food chain

B. Binds the inorganic nutrients into organic matter.

C. Is based on energy present in detritus

D. Does not add energy into ecosystem.

Answer: B



Watch Video Solution

26. Which of the following statements is not correct about energy flow in an ecosystem ?

A. Pyramid of energy is always straight

B. Energy flow is unidirectional

C. Energy flow is cyclic

D. Ecological efficiency is generally 10 %

Answer: C



Watch Video Solution

27. Pyramid of number in a cropland ecosystem is

A. Upright

B. Inverted

C. Rhomboidal

D. Spindle shaped

Answer: C



Watch Video Solution

28. Occur on newly cooled lava, Faster succession, Progress to mesic condition, Occurs on flooded land, Slower succession, changes in flora only.

From the above features, how many are associated with primary succession ?

A. Two

B. Five

C. Four

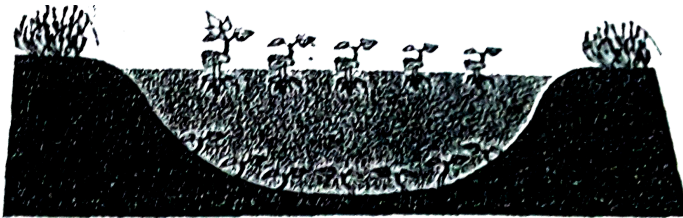
D. Three

Answer: D



Watch Video Solution

29. Choose the correct identification for the given stage of succession and is preceded by which stage respectively ?



A. Marsh -meadow , Reed-swamp

B. Submerged free floating, Reed - swamp

C. Submerged plant, scrub stage

D. Phytoplankton, Marsh-meadow

Answer: B



Watch Video Solution

30. Climax communities

A. Are more diverse than pioneer communities

B. Are less stable than pioneer communities

C. Have greater entropy than pioneer communities

D. Have a large number but fewer species than pioneer communities

Answer: A



Watch Video Solution

31. Successful establishment of a species in a new area is called as

A. Coaction

B. Reaction

C. Germination

D. Esisis

Answer: D



Watch Video Solution

32. In the hydrosere the reed - swamp stage is followed by

A. Marsh -meadow stage

B. Submerged free floating plant stage

C. Submerged plant, stage

D. Phytoplankton

Answer: B



Watch Video Solution

33. Consider the following statements about carbon cycle and choose how many statements are correct ?

A. Two

B. Three

C. Four

D. Five

Answer: B



View Text Solution

34. Atmospheric input is negligible in

A. Carbon cycle

B. Phosphorus cycle

C. Oxygen cycle

D. Nitrogen cycle

Answer: D



Watch Video Solution

35. Phosphates remain outside the natural cycle for a long time

A. When they form compounds with metals

B. When they are incorporated in bone and teeth

C. When the bodies of the organisms excrete and decompose

D. Both (1) & (2)

Answer: B



Watch Video Solution

Assignment Section C

1. Which ecosystem has the maximum biomass ?

- A. Forest ecosystem
- B. Grassland ecosystem
- C. Pond ecosystem

D. Lake ecosystem

Answer: D



Watch Video Solution

2. Presence of plants arranged into well-defined vertical layers depending on their height can be seen best in

A. Tropical Savannah

B. Tropical Rain Forest

C. Grassland

D. Temperate forest

Answer: B



Watch Video Solution

3. The primary producers of the deep-sea hydrothermal vent ecosystem are:

A. Green algae

B. Chemosynthetic bacteria

C. Blue - green algae

D. Coral reefs

Answer: B



Watch Video Solution

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

A. Green algae

B. Lichens

C. Liverworts

D. Mosses

Answer: A



[Watch Video Solution](#)

5. Which one of the following is a characteristic feature of cropland ecosystem?

- A. Ecological succession
- B. Absence of soil organisms
- C. Least genetic diversity
- D. Absence of weeds

Answer: D



[Watch Video Solution](#)

6. The term ecosystem was coined by

A. E.Warming

B. E.P.Odum

C. A.G.Tansley

D. E.Haeckel

Answer: C



Watch Video Solution

7. Most animals that live in deep oceanic waters are:

- A. Detritivores
- B. Primary consumers
- C. Secondary consumers
- D. Tertiary consumers

Answer: B



Watch Video Solution

8. During ecological succession:

- A. The changes lead to a community that is in near equilibrium with the environment and is called pioneer community
- B. The gradual and predictable change in species composition occurs in a given area
- C. The establishment of a new biotic community is very fast in its primary phase
- D. The number and types of animals remain constant

Answer: C



Watch Video Solution

9. Vertical distribution of different species occupying different levels in a biotic community is known as

- A. Pyramid
- B. Divergence
- C. Stratification
- D. Zonation

Answer: B



Watch Video Solution

10. In an ecosystem the rate of production of organic matter during photosynthesis is termed as

- A. Net productivity
- B. Net primary productivity
- C. Gross primary productivity
- D. Newly created pond

Answer: C



[Watch Video Solution](#)

11. Secondary succession takes place on/in

- A. Newly cooled lava
- B. Bare rock
- C. Degraded forest
- D. Newly created pond

Answer: A



[Watch Video Solution](#)

12. The mass of living material at a trophic level at a particular time is called

- A. Standing crop
- B. Gross primary productivity
- C. Standing state
- D. Net primary productivity

Answer: D



Watch Video Solution

13. Match the following and select the correct option :

Column-I	Column-II
a. Earthworm	(i) Pioneer species
b. Succession	(ii) Detritivore
c. Ecosystem service	(iii) Natality
d. Population growth	(iv) Pollination

A. a(i),b(ii),c(iii),d(iv)

B. a(iv),b(i),c(iii),d(ii)

C. a(iii),b(ii) ,c(iv),d(i)

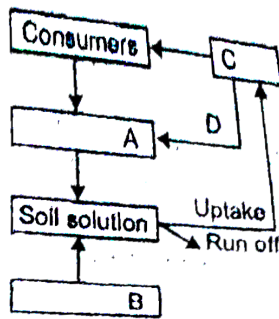
D. a(ii),b(i),c(iv),d(iii)

Answer: D



Watch Video Solution

14. 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
(1)	Rock minerals	Detritus	Litter fall	Producers
(2)	Litter fall	Producers	Rock minerals	Detritus
(3)	Detritus	Rock minerals	Producer	Litter fall
(4)	Producers	Litter fall	Rock minerals	Detritus



Watch Video Solution

15. If 20 J of energy is trapped at producer level, then how much energy will be available to peacock as food in the following chain?

Plant → Mice → Snake → Peacock

A. $0.02J$

B. $0.002J$

C. $0.2J$

D. $0.0002 J$

Answer: A



Watch Video Solution

16. Natural reservoir of phosphorus is:

A. Animal bones

B. Rock

C. Fossils

D. Sea water

Answer: B



Watch Video Solution

17. Secondary productivity is rate of formation of new organic matter by:

- A. Parasite
- B. Consumer
- C. Decomposer
- D. Producer

Answer: D



Watch Video Solution

18. Which one of the following processes during decomposition is correctly described?

A. Humification -Leads to the accumulation of a dark coloured substance humus which undergoes microbial action at a very fast rate

B. Catabolism -Last step in the decomposition under fully anaerobic condition.

C. Leaching -water soluble inorganic nutrients rise to the top layers of soil

D. Fragmentation -Carried out by organisms

such as earthworm

Answer: D



Watch Video Solution

19. Which one of the following is not a functional unit of an ecosystem

A. Productivity

B. Stratification

C. Energy flow

D. Decomposition

Answer: D



Watch Video Solution

20. The upright pyramid of number is absent in

A. Lake

B. Grassland

C. Pond

D. Forest

Answer: C



Watch Video Solution

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

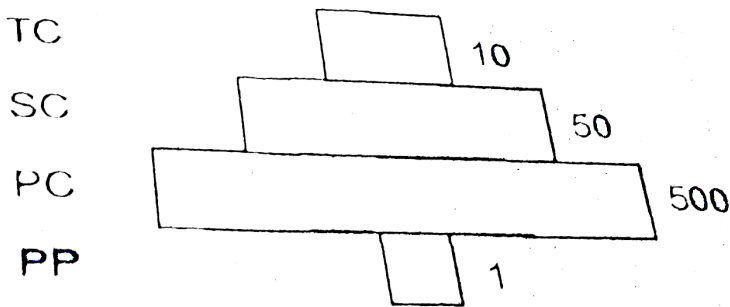
- A. Nitrogen cycle
- B. Carbon cycle
- C. Sulphur cycle
- D. Phosphorus cycle

Answer: D



Watch Video Solution

22. Given below is an imaginary pyramid of numbers. What could be one of the possibilities about certain organisms at some of the different levels?



A. Level one PPP is " pipal trees" and the level SC

is "sheep"

B. Level PC is "rates" and level SC is "cats"

C. Level PC is "insects" and level SC is " small insectivorous birds"

D. Level PP is " phytoplanktons" in sea and " Whale" on top level TC

Answer: D



Watch Video Solution

23. Identify the possible link "A" in the following food chain : Plant → insect → frog → "A" →

eagle:

A. Cobra

B. Parrot

C. Rabbit

D. Wolf

Answer: C



Watch Video Solution

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



Watch Video Solution

25. The second stage of hydrosere is occupied by plants like

- A. Azolla

B. Typha

C. Salix

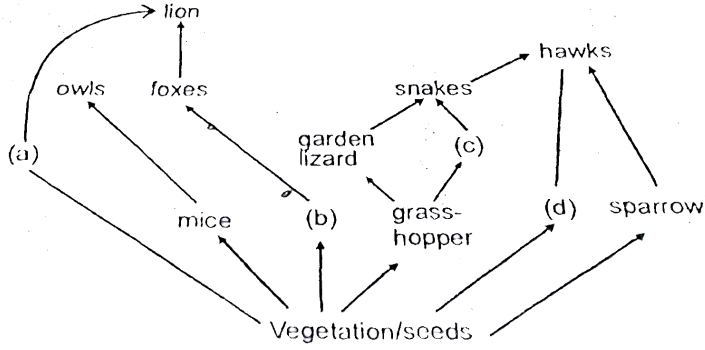
D. Vallisneria

Answer: A



Watch Video Solution

26. Identify the likely organisms (a), (b), (c) and (d) in the food web shown below



- A. (A) (B) (C) (D)
 (1) Dear Rabbit Frog Rat
- B. (A) (B) (C) (D)
 (2) Dog Squirrel Bat Deer
- C. (A) (B) (C) (D)
 (3) Rat Dog Tortoise Crow
- D. (A) (B) (C) (D)
 (4) Squirrel Cat Rat Pigeon

Answer: A

Watch Video Solution

27. Mass of living matter at a trophic level in an area at any time is called:

- A. Standing state
- B. Standing crop
- C. Dentritus
- D. Humus

Answer: B



Watch Video Solution

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

- A. It is similar to primary succession except that it has a relatively fast pace.
- B. It begins on a bare rock
- C. It occurs on a deforested site
- D. It follows primary succession

Answer: B



Watch Video Solution

29. Which one of the following statements for pyramid of energy is incorrect, whereas the remaining three are correct?

A. It is upright in shape

B. Its base is broad

C. It shows energy content of different trophic level organisms

D. It is inverted in shape

Answer: B



Watch Video Solution

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

A. Goat

B. Frog

C. Sparrow

D. Lion

Answer: D



Watch Video Solution

31. Both, hydrarch and xerarch successions lead to

A. Highly dry conditions

B. Excessive wet conditions

C. Medium water conditions

D. Xeric conditions

Answer: C



Watch Video Solution

32. Of the total incident solar radiation the proportion of PAR is:

A. More than 80%

B. About 70%

C. About 60%

D. Less than 50%

Answer: C



Watch Video Solution

33. The breakdown of detritus into smaller particles by earthworm is a process called

A. Mineralisation

B. Catabolism

C. Humification

D. Fragmentation

Answer: C



Watch Video Solution

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

A. Gross primary productivity

B. Net primary productivity

C. Secondary productivity

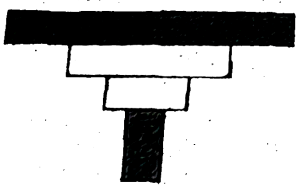
D. Standing crop

Answer: C

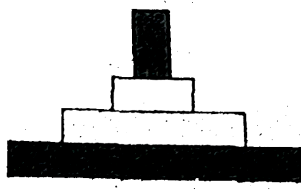


Watch Video Solution

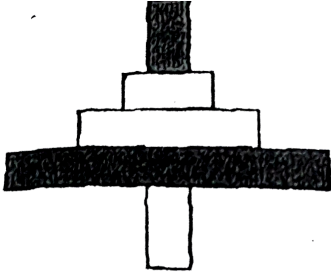
35. Which of the following representations shows the pyramid of numbers in a forest ecosystem ?



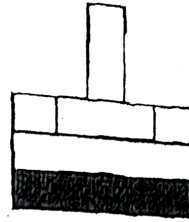
A



B



C



D

A. D

B. A

C. B

D. C

Answer: D



36. The correct sequence of plants in a hydrosere is

A. Volvox → Hydrilla → Pistia → Scirpus

→ Lantana → Oak

B. Pistia → Volvox → Scirpus → Oak →

Lantana

C. Oak → Lantana → Volvox → Hydrilla

→ Pistia → Scirpus.

D. Oak → Landtana → Scirpus → Pistia

→ Hydrilla → Volvox

Answer: B



Watch Video Solution

37. Which one of the following types of organisms occupy more than one trophic level in a pond ecosystem?

A. Fish

B. Zooplanktons

C. Frog

D. Phytoplankton

Answer: B



Watch Video Solution

38. About 70% of total global carbon is found in

A. Forests

B. Grasslands

C. Agroecosystems

D. Oceans

Answer: C



Watch Video Solution

39. Consider the following statements concerning food chains

(i) Removal of 80% tigers from an area resulted in greatly increased growth of vegetation

(ii) Removal of most of the carnivores resulted in an increased population of deers

(iii) The length of food chains is generally limited to 3 - 4 trophic levels due to energy loss

(iv) The length of food chains may vary from 2 to 8 trophic levels

Which two of the above statements are correct?

A. a&b

B. b&c

C. c&d

D. a&d

Answer: C



Watch Video Solution

40. The slow rate of decomposition of fallen logs in nature is due to their

A. low cellulose content

B. low moisture content

C. poor nitrogen content

D. Anaerobic environment around them

Answer: B



Watch Video Solution

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

A. Temperature deciduous forest

B. Tropical Rain Forest

C. Tropical deciduous forest

D. Temperate evergreen forest

Answer: A



Watch Video Solution

42. Which one of the following is not used for construction of ecological pyramids?

A. Dry weight

B. Number of individuals

C. Rate of energy flow

D. Fresh weight

Answer: C



Watch Video Solution

43. Which of the following groups is absolutely essential functional component of the ecosystem?

A. Producers

B. Producers and herbivores

C. Producers and detritivores

D. Detritivores

Answer: D



Watch Video Solution

44. Which ecosystem has the highest gross primary productivity ?

A. Mangroves

B. Rain forest

C. Grassland

D. Coral reef

Answer: D



[Watch Video Solution](#)

45. The rate at which light energy is converted into chemical energy of organic molecules, is the ecosystem's

- A. Net secondary productivity
- B. Gross primary productivity
- C. Net primary productivity
- D. Gross primary productivity

Answer: C



[Watch Video Solution](#)

46. Which of the following is expected to have the highest value ($gm/m^2/yr$) in a grassland ecosystem?

- A. Secondary production
- B. Tertiary production
- C. Gross production (GP)
- D. Net production (NP)

Answer: B



47. 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: D



Watch Video Solution

48. Which of the following is a primary consumer in maize field ecosystem ?

A. Lion

B. Grasshopper

C. Wolf

D. Phytoplankton

Answer: A



Watch Video Solution

49. When man eats fish, which feeds on zooplankton, which have eaten small plants, the producer in the chain is:

A. Zooplankton

B. Small plants

C. Fish

D. Man

Answer: D



Watch Video Solution

50. The dominant second trophic level , in a lake ecosystem , is

- A. Phytoplanktons
- B. Zooplanktons
- C. Benthos
- D. Submerged rooted vegetation

Answer: B



Watch Video Solution

51. If we completely remove the decomposers from an ecosystem, its functioning will be adversely affected, because

- A. Mineral movement will be blocked
- B. The rate of decomposition will be very high
- C. Energy flow will be blocked
- D. Herbivores will not receive solar energy

Answer: A



Watch Video Solution

52. In a biotic community , primary consumers are

A. Detritivores

B. Herbivores

C. Carnivores

D. Ominvores

Answer: B



Watch Video Solution

53. The 10 % energy transfer law of food chain was given by

A. Lindemann

B. Transley

C. Stanley

D. Weismann

Answer: B



Watch Video Solution

54. Which of the following acts as "nature's scavengers"?

A. Insects

B. Microorganisms

C. Man

D. Animals

Answer: B



Watch Video Solution

55. Which type of animals are relatively more abundant in desert grassland?

A. Aquatic

B. Fossorial

C. Diurnal

D. Arboreal

Answer: C



Watch Video Solution

56. In a terrestrial ecosystem such as forest, maximum energy is at trophic level:

A. T_3

B. T_4

C. T_1

D. T_2

Answer: B



Watch Video Solution

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

A. 10 %

B. 20 %

C. 1 %

D. 2 %

Answer: B



Watch Video Solution

58. Which is the reason for highest biomass in aquatic ecosystem-

- A. Nanoplankton, blue green algae, green algae
- B. Sea grass, and slime moulds
- C. Benthic and brown algae
- D. Diatoms

Answer: D



Watch Video Solution

59. Plant Decomposers belongs to:-

- A. Monera and fungi
- B. Fungi and plants
- C. Protista and animalia
- D. Animalia and monera

Answer: A



Watch Video Solution

60. Bamboo plant is growing in a fir forest then what will be the trophic level of it ?

- A. First trophic
- B. Second trophic level
- C. Third trophic level
- D. Fourth trophic level

Answer: A



Watch Video Solution

61. Which of the following is the most stable ecosystem?

A. Mountain

B. Ocean

C. Forest

D. Desert

Answer: D



Watch Video Solution

62. The primary succession refers to the development of communities on a

- A. Forest clearing after devastating fire
- B. Newly-exposed habitat with no record of earlier vegetation
- C. Freshly cleared crop field
- D. Pond, freshly filled with water after a dry phase

Answer: A



Watch Video Solution

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

A. Nitrogen cycle

B. Carbon cycle

C. Sulphur cycle

D. Phosphorus cycle

Answer: A



Watch Video Solution

64. Which of the following pairs is a sedimentary type of biogeochemical cycle ?

- A. Phosphorus and nitrogen
- B. Phosphorus and sulphur
- C. Oxygen and nitrogen
- D. Phosphorus and carbon

Answer: B



Watch Video Solution

65. the main role of bacteria in the carbon cycle involves

A. Chemosynthesis

B. Digestion or breakdown of organic compounds

C. Photosynthesis

D. Assimilation of nitrogenous compounds

Answer: A



Watch Video Solution

Section D Assertion Reason Type Questions

1. A: Agriculture and aquacultures are man maintained ecosystems.

R: All biotic and abiotic factors are managed by humans in these ecosystems.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason, is not the correct explanation of the

assertion , then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3).

D. If both Assertion and Reason are false statements , then mark (4).

Answer: C



Watch Video Solution

2. Assertion: Warm and moist environment can enhance the rate of decomposition

Reason: Warm and moist climate leads to create anaerobic condition which promotes decomposition.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason, is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer: C



Watch Video Solution

3. Assertion: Detritus food chain begins with decomposers.

Reason: Detritivores, like fungi and bacteria, are major decomposers in such food chains.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason, is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer: A



Watch Video Solution

4. Assertion: Ecological pyramids cannot explain all vital functions of any ecosystem.

Reason: Pyramids actually do not explain the role of organisms working at more than one trophic level.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason, is not the correct explanation of the assertion , then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3).

D. If both Asseration and Reason are false statements , then mark (4).

Answer: A



Watch Video Solution

5. Assertion: Successional process starts only in those areas where no living organisms ever existed.

Reason: These areas are not supported by physical environmental conditions.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason, is not the correct explanation of the assertion, then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3).

D. If both Assertion and Reason are false statements , then mark (4).

Answer: A



Watch Video Solution

6. Secondary productivity is rate of formation of new organic matter by:

- A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)
- B. If both Assertion & Reason are true but the reason, is not the correct explanation of the assertion, then mark (2)
- C. If Assertion is true statement but Reason is false, then mark (3).
- D. If both Assertion and Reason are false statements, then mark (4).

Answer: A



Watch Video Solution

7. A: Detrivores and decomposers hold up a part of nutrients contained in detritus.

R: Immobilised after the death of saprotrophs.

A. If both Assertion & Reason are true and the reason is the corect explanation of the assertion , then mark (1)

B. If both Assertion & Reason are true but the reason, is not the correct explanation of the assertion , then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3).

D. If both Assertion and Reason are false statements , then mark (4).

Answer: C



Watch Video Solution

8. A: Neither the community modifies environment nor the environment forces the community to leave the place in climax stage of succession.

R: Climax community is xerophytic in most of the types of succession.

- A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion , then mark (1)
- B. If both Assertion & Reason are true but the reason, is not the correct explanation of the assertion , then mark (2)
- C. If Assertion is true statement but Reason is false , then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer: C



Watch Video Solution

9. A: Ecological pyramid of biomass is generally inverted in sea

R: Biomass of fishes exceeds that of phytoplanktons.

- A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)
- B. If both Assertion & Reason are true but the reason, is not the correct explanation of the assertion, then mark (2)
- C. If Assertion is true statement but Reason is false, then mark (3).
- D. If both Assertion and Reason are false statements, then mark (4).

Answer: A



Watch Video Solution

10. A: Pyramid of biomass is always upright for tree ecosystem.

R: Total biomass of a tree in a specific area is more than that of herbivores.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)

B. If both Assertion & Reason are true but the reason, is not the correct explanation of the

assertion , then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3).

D. If both Assertion and Reason are false statements , then mark (4).

Answer: A



Watch Video Solution

11. A: Niche become general and broader during biotic succession.

R: Species diversity increases but organic matter is decreased.

- A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion , then mark (1)
- B. If both Assertion & Reason are true but the reason, is not the correct explanation of the assertion , then mark (2)
- C. If Assertion is true statement but Reason is false , then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer: D



Watch Video Solution

12. A: Stratification helps in accommodation of a large number and types of plants in the same area.

R: It is the occurrence of horizontal zonation in the ecosystem.

- A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1)
- B. If both Assertion & Reason are true but the reason, is not the correct explanation of the assertion, then mark (2)
- C. If Assertion is true statement but Reason is false, then mark (3).
- D. If both Assertion and Reason are false statements, then mark (4).

Answer: C



Watch Video Solution

13. A: During succession , nutrient availability decreases while level increaes.

R: NCP (Net community productivity) decreaes during succession.

A. If both Assertion & Reason are true and the reason is the corect explanation of the assertion , then mark (1)

B. If both Assertion & Reason are true but the reason, is not the correct explanation of the

assertion , then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3).

D. If both Assertion and Reason are false statements , then mark (4).

Answer: D



Watch Video Solution

14. A: Decomposers are excluded from the food chains.

R: They act on all trophic level of a food chains.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion , then mark (1)

B. If both Assertion & Reason are true but the reason, is not the correct explanation of the assertion , then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3).

D. If both Assertion and Reason are false statements , then mark (4).

Answer: A



Watch Video Solution

15. A: In hydrosere , reed swamp stage is followed by floating plant stage .

R: Sedge meadow stage has amphibious herbaceous plants.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion , then mark (1)

B. If both Assertion & Reason are true but the reason, is not the correct explanation of the assertion , then mark (2)

C. If Assertion is true statement but Reason is false , then mark (3).

D. If both Asseration and Reason are false statements , then mark (4).

Answer: B



Watch Video Solution