BIOLOGY

BOOKS - OSWAL PUBLICATION

OUR ENVIRONMENT

Stand Alone Mcqs

1. In the given food chain, suppose the amount of energy at fourth trophic level is 5 kJ, what will be

the energy available at the producer level ?

$\text{Grass} \rightarrow \text{Grasshopper} \rightarrow \text{Frog} \rightarrow \text{Snake} \rightarrow \text{Hawk}$

A. 5 kJ

B. 50 kJ

C. 500 kJ

D. 5,000 kJ

Answer: D

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2. In an ecosystem, the 10% of energy available for transfer from one trophic level to the next is in the form of

A. heat energy.

B. light energy

C. chemical energy.

D. mechanical energy.

Answer: C

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3. Organisms of a higher trophic level which feed on several types of organisms belonging to a lower trophic level constitute the

A. food web

B. ecological pyramid.

C. ecosystem.

D. food chain.

Answer: A

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4. Which group of organisms are not constituents of a food chain ?

(i) Grass, lion, rabbit, wolf

(ii) Plankton, man, fish, grasshopper

(iii) Wolf, grass, snake, tiger

(iv) Frog, snake, eagle, grass, grasshopper

A. (i) and (iii)

B. (iii) and (iv)

C. (ii) and (iii)

D. (i) and (iv)

Answer: C

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5. The percentage of solar radiation absorbed by all the green plants for the process of photosynthesis is about

A. 1%

B. 5%

C. 8%

D. 10%

Answer: A

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6. Select the mismatched pair in the following and correct it.

A. Bio-magnification -Accumulation of chemicals at the successive trophic levels of a food chain

B. Ecosystem-Biotic components of environment

C. Aquarium - A man-made ecosystem

D. Parasites -Organisms which obtain food from other living organisms

Answer: B

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7. Which one of the followings is an artificial ecosystem?

A. Pond

B. Crop field

C. Lake

D. Forest

Answer: B

8. In a food chain, the third trophic level is always occupied by

A. carnivores

B. herbivores

C. decomposers

D. producers

Answer: A

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9. Which gas is produced due to incomplete combustion of fuel?

A. Oxides of nitrogen

B. Methane

C. Carbon monoxide

D. Carbon dioxide

Answer: C

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10. Depletion of ozone is mainly due to

A. chlorofluorocarbon compounds.

B. carbon monoxide.

C. methane.

D. pesticides

Answer: A

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11. Excessive exposure of human to UV-rays results in

(i) damage to immune system, (ii) damage to lungs

(iii) skin cancer, (iv) peptic ulcers

A. (i) and (ii)

B. (ii) and (iv)

C. (i) and (iii)

D. (iii) and (iv)

Answer: C

12. Which of the following are environment-friendly practices?

A. Carrying cloth-bags to put purchases in while shopping.

B. Switching off unnecessary lights and fans.

C. Walking to school instead of getting your mother to drop you on her scooter.

D. All of the above.

Answer: D

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13. Accumulation of non-biodegradable pesticides in the food chain in increasing amount at each higher trophic level is known as

A. eutrophication.

B. pollution.

C. bio-magnification.

D. accumulation.

Answer: C

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14. Disposable plastic plates should not be used because :

A. they are made of materials with light weight.

B. they are made of toxic materials.

C. they are made of biodegradable materials.

D. they are made of non-biodegradable materials.

Answer: D

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15. What happens to the earth's temperature due to the greenhouse effect?

A. Increases

B. Decreases

C. Remains the same

D. All of the above

Answer: A

16. Why is it difficult to degrade non-biodegradable wastes?

A. Because non-biodegradable wastes cannot be recycled

B. Because microorganisms cannot decompose it.

C. They can be made into organic wastes.

D. All of the above

Answer: B

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Assertion And Reason Based Mcqs

1. Assertion: Food chain is responsible for the entry of harmful chemicals in our bodies.

Reason: The length and complexity of food chains vary greatly.

A. Both Assertion and Reason are true and Reason is the correct explanation of Assertion.

B. Both Assertion and Reason are true but Reason is NOT the correct explanation of Assertion.

C. Assertion is true but Reason is false.

D. Assertion is false and Reason is true.

Answer: B

2. Assertion: Greater number of individuals are present in lower trophic levels.

Reason: The flow of energy is unidirectional.

A. Both Assertion and Reason are true and Reason is the correct explanation of Assertion.

B. Both Assertion and Reason are true but Reason is NOT the correct explanation of Assertion.

C. Assertion is true but Reason is false.

D. Assertion is false and Reason is true.

Answer: B

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3. Assertion (A): Herbivores are called first order consumers.

Reason (R): Tiger is a top carnivore.

A. Both Assertion and Reason are true and Reason is the correct explanation of Assertion.

B. Both Assertion and Reason are true but Reason is NOT the correct explanation of Assertion.

C. Assertion is true but Reason is false.

D. Assertion is false and Reason is true.

Answer: B

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4. In what direction does the energy flow in a food chain? Why as it unidirectional?

A. Both Assertion and Reason are true and Reason is the correct explanation of Assertion.

B. Both Assertion and Reason are true but Reason is NOT the correct explanation of Assertion.

C. Assertion is true but Reason is false.

D. Assertion is false and Reason is true.

Answer: A

5. The first trophic level in any kind of food chain is always a green plant because

A. Both Assertion and Reason are true and Reason is the correct explanation of Assertion.

B. Both Assertion and Reason are true but Reason is NOT the correct explanation of Assertion.

C. Assertion is true but Reason is false.

D. Assertion is false and Reason is true.

Answer: A

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6. Assertion (A): Decomposers keep the environment clean.

Reason (R): They recycle matter by breaking down the organic remains and waste products of plants and animals.

A. Both Assertion and Reason are true and Reason is the correct explanation of Assertion.

B. Both Assertion and Reason are true but Reason is NOT the correct explanation of Assertion.

C. Assertion is true but Reason is false.

D. Assertion is false and Reason is true.

Answer: A

7. Assertion (A): The concentration of harmful chemicals is more in human beings.

Reason (R): Man is at the apex of the food chain.

A. Both Assertion and Reason are true and Reason is the correct explanation of Assertion.

B. Both Assertion and Reason are true but Reason is NOT the correct explanation of Assertion.

C. Assertion is true but Reason is false.

D. Assertion is false and Reason is true.

Answer: A

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8. CFC is not recommended to be used in refrigerators because they:

A. Both Assertion and Reason are true and Reason is the correct explanation of Assertion.

B. Both Assertion and Reason are true but Reason is NOT the correct explanation of Assertion.

C. Assertion is true but Reason is false.

D. Assertion is false and Reason is true.

Answer: A

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9. Assertion (A): Polythene bags and plastic containers are non-biodegradable substances.

Reason (R): They can be broken down by micro organisms in natural simple harmless substances.

A. Both Assertion and Reason are true and Reason is the correct explanation of Assertion.

B. Both Assertion and Reason are true but Reason is NOT the correct explanation of

Assertion.

C. Assertion is true but Reason is false.

D. Assertion is false and Reason is true.

Answer: C

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10. Assertion (A): Ozone is both beneficial and damaging

Reason (R): Stop the release of chlorofluorocarbons to protect the ozone.

A. Both Assertion and Reason are true and Reason is the correct explanation of Assertion.

B. Both Assertion and Reason are true but Reason is NOT the correct explanation of Assertion.

C. Assertion is true but Reason is false.

D. Assertion is false and Reason is true.

Answer: B

11. Assertion (A): Wastes such as plastics, paper, vegetable or fruit peels, which are generated in our house daily are biodegradable.

Reason (R): Biodegradable wastes can be broken down into simpler, harmless substance in nature in due course of time by the biological processes such as action of microorganisms.

A. Both Assertion and Reason are true and Reason is the correct explanation of Assertion.

B. Both Assertion and Reason are true but Reason is NOT the correct explanation of Assertion.

C. Assertion is true but Reason is false.

D. Assertion is false and Reason is true.

Answer: D

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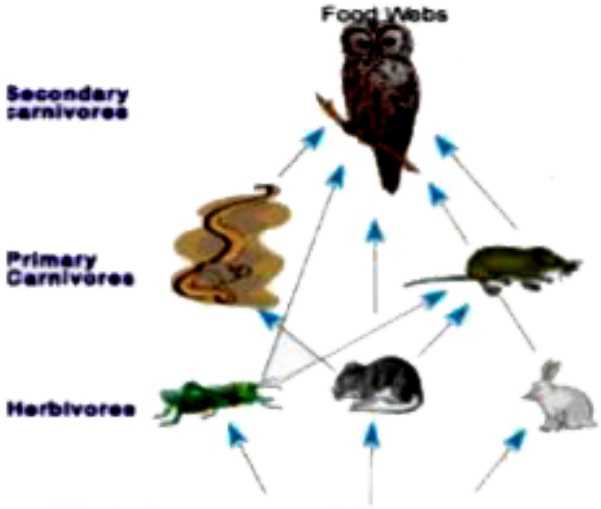
Case Based Mcqs

1. Food chains are very important for the survival of most species. When only one element is removed from the food chain it can result in extinction of a species in some cases. The foundation of the food chain consists of primary producers

Primary producers, or autotrophs, can use either solar energy or chemical energy to create complex organic compounds, whereas species at higher trophic levels cannot and so must consume producers or other life that itself consumes producers. Because the sun's light is

necessary for photosynthesis, most life could not exist if the sun disappeared. Even so, it has recently been discovered that there are some forms of life, chemotrophs, that appear to gain all their metabolic energy from chemosythesis driven by hydrothermal vents, thus showing that some life may not require solar energy to thrive.



If 10,000 J solar energy falls on green plants in a

terrestrial ecosystem, what percentage of solar energy will be converted into food energy?

A. 10,000 J

B. 100 J

C. 1000 J

D. It will depend on the type of the terrestrial plant.

Answer: B

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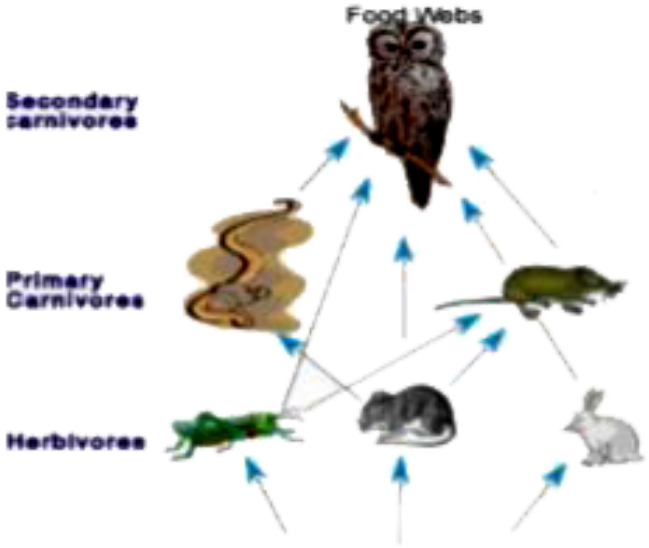

Mr. X is eating curd/yogurt. For this food intake

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

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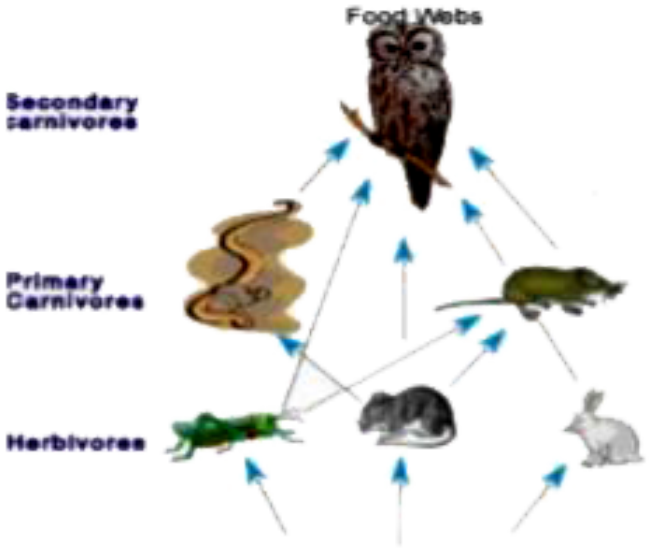

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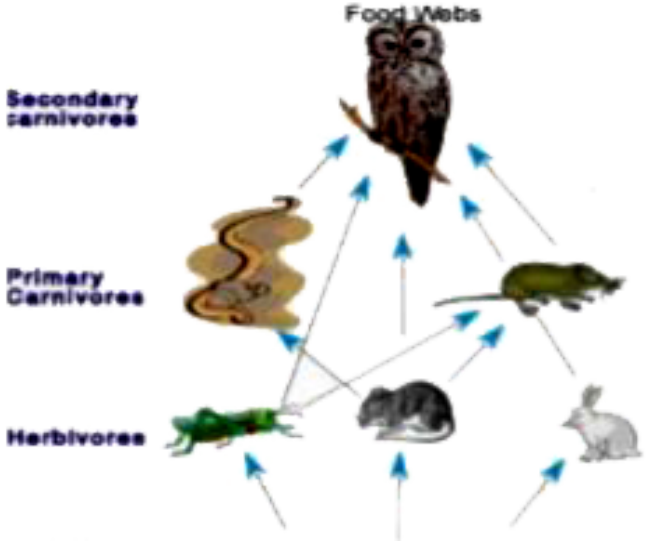

The decomposers are not included in the food

chain. The correct reason for the same is because decomposers:

A. Act at every trophic level of the food chain

B. Do not breakdown organic compounds

C. Convert organic material to inorganic forms

D. Release enzymes outside their body to convert organic material to inorganic forms

Answer: A

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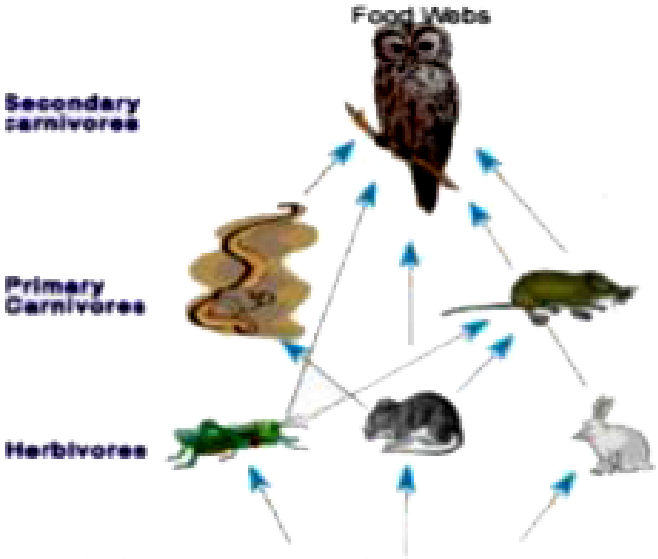

Matter and energy are two fundamental inputs of an ecosystem. Movement of

A. Energy is bidirectional and matter is repeatedly circulating

B. Energy is repeatedly circulation and matter is unidirectional.

C. Energy is unidirectional and matter is repeatedly circulating.

D. Energy is multidirectional and matter is bidirectional.

Answer: C

6. Food chains are very important for the survival of most species. When only one element is removed from the food chain it can result in extinction of a species in some cases. The foundation of the food chain consists of primary producers

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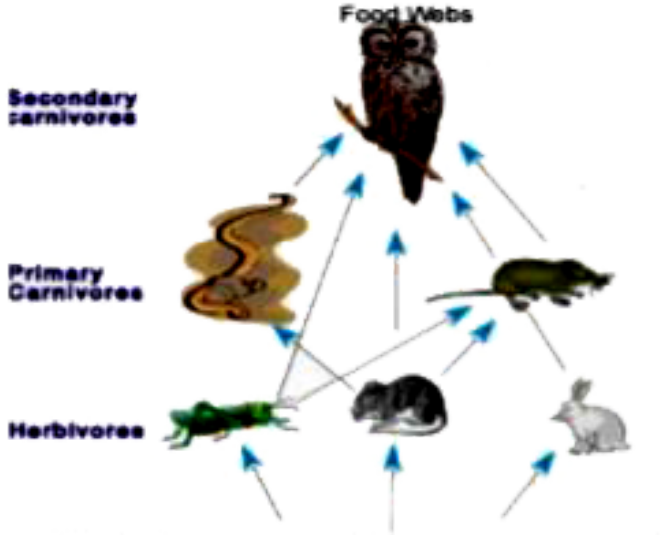

Which of the following limits the number of trophic levels in a food chain?

A. Decrease in energy at higher trophic levels

B. Less availability of food

C. Polluted air

D. Water

Answer: A

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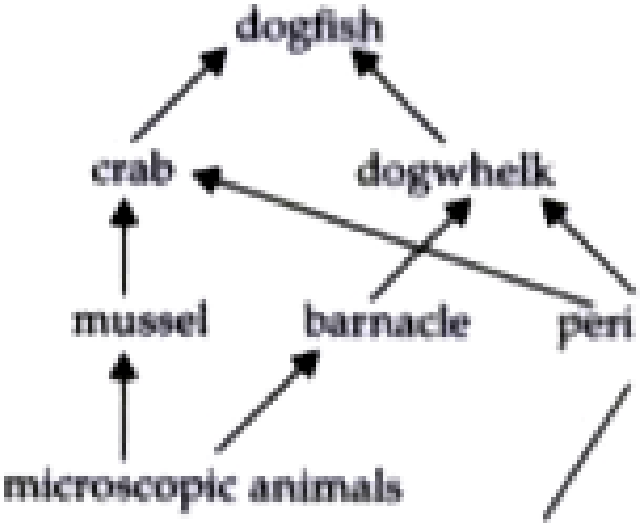
7. Carefully study the given food web



The mussel can be described as

A. Producer

B. Primary consumer

C. Secondary consumer

D. decomposer

Answer: C

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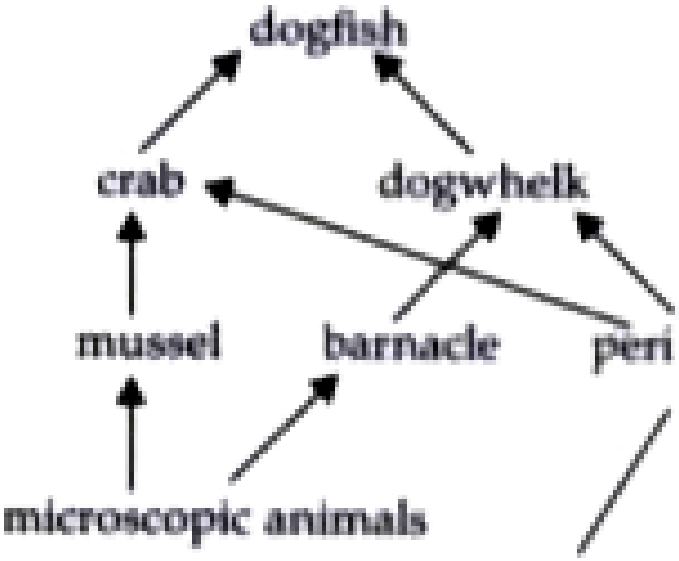
8. Carefully study the given food web



Which trophic level is incorrectly defined?

A. Carnivores - secondary or tertiary consumers

B. Decomposers - microbial heterotrophs

C. Herbivores - primary consumers

D. Omnivores - molds, yeast and mushrooms

Answer: D

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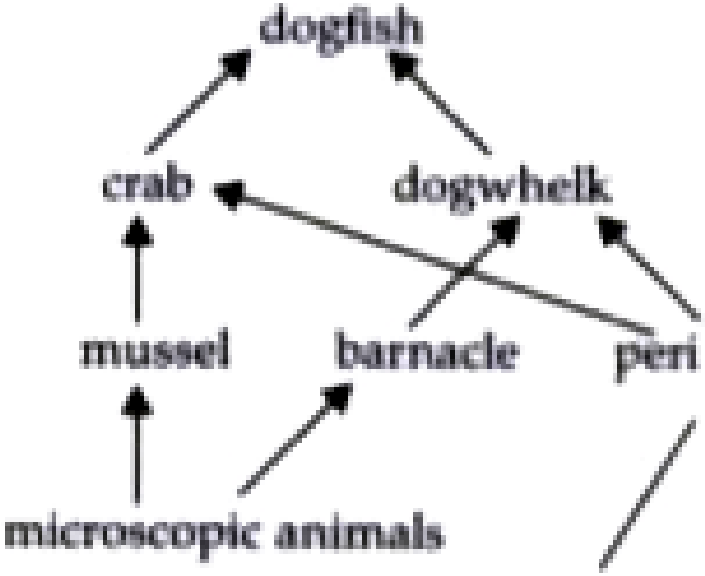

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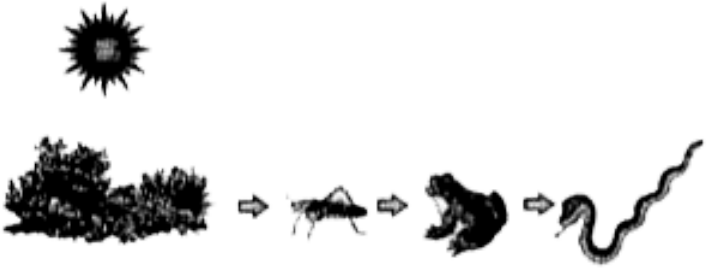

A. Grassland food chain

B. Parasitic food chain

C. Forest food chain

D. Aquatic food chain

Answer: A

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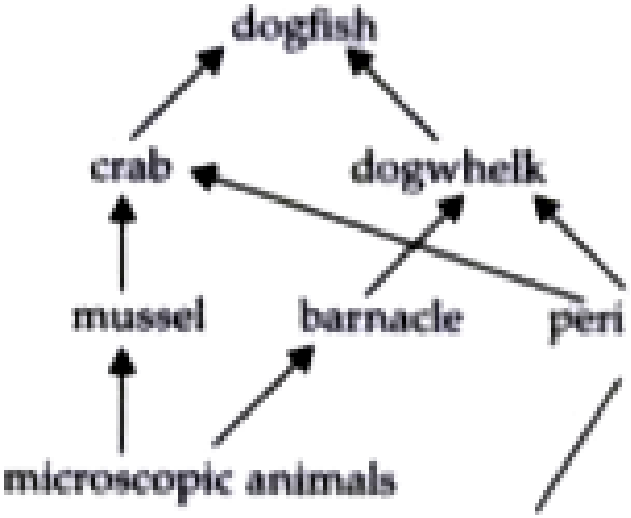
10. Carefully study the given food web



Why do all food chains start with plants?

A. Because plants are easily grown

B. Because plants are nutritious

C. Because plants can produce its own energy

D. Because plants do not require energy

Answer: C

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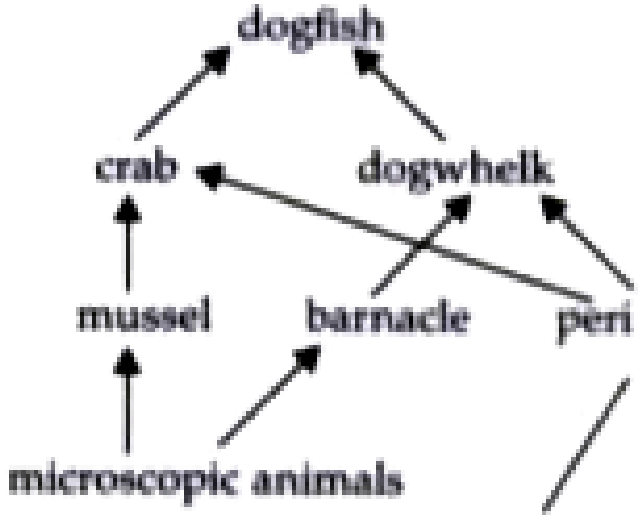
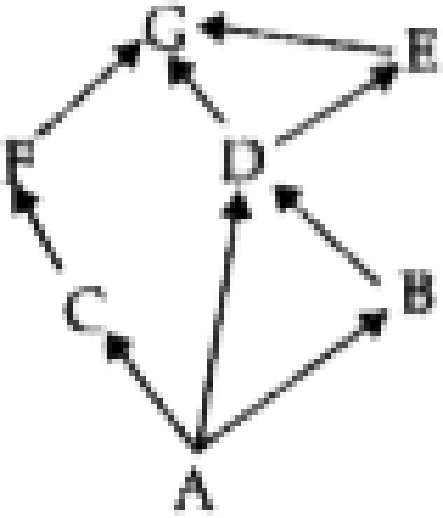
11. Carefully study the given food web



In the food web, which two organisms are

competing for food?



A. A and B

B. D and F

C. D and F

D. B and D

Answer: D

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12. Biosphere is a global ecosystem composed of living organisms and abiotic factors from which they derive energy and nutrients. And ecosystem is defined as structural and functional unit of the biosphere comprising of living and non-living environment that interact by means of food chains and chemical cycles resulting in energy flow, biotic diversity and material cycling to form a stable, self-supporting system

Which trophic level is incorrectly defined?

A. Carnivores - secondary or tertiary consumers

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Answer: C

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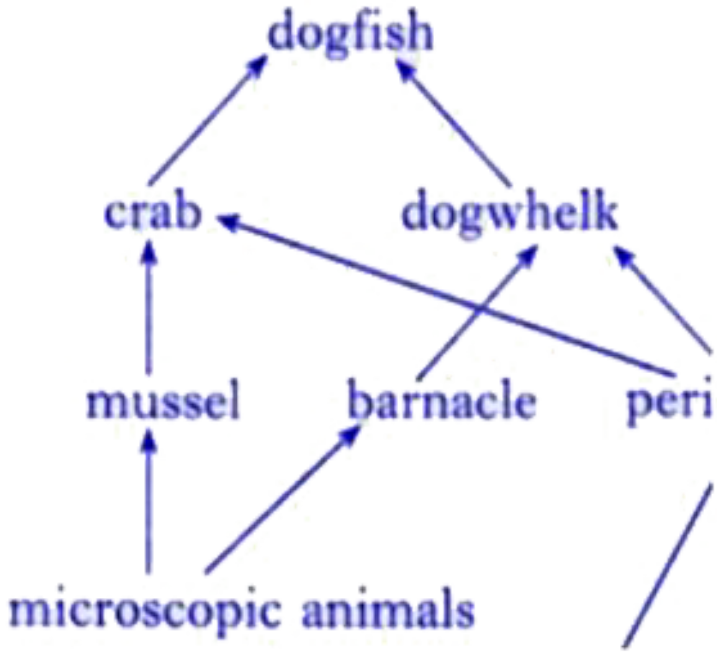
The diagram below shows a food web from the sea shore



The mussel can be described as

A. Producer

B. Primary consumer

C. Secondary consumer

D. Decomposer

Answer: A

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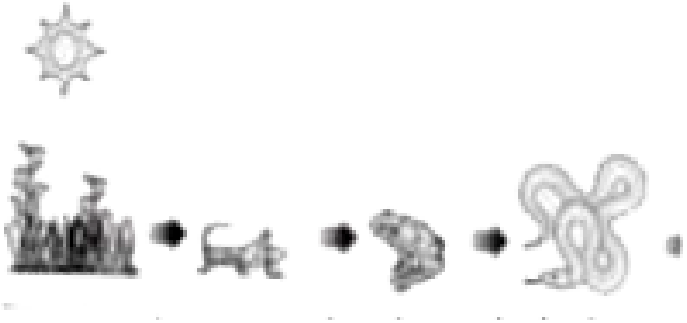

A. Grassland food chain

B. Parasitic food chain

C. Forest food chain

D. Aquatic food chain

Answer: C

15. Biosphere is a global ecosystem composed of living organisms and abiotic factors from which they derive energy and nutrients. And ecosystem is defined as structural and functional unit of the biosphere comprising of living and non-living environment that interact by means of food chains and chemical cycles resulting in energy

flow, biotic diversity and material cycling to form a stable, self-supporting system

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 herbivores. (iii) The length of the food chains is

generally limited to 3 – 4 trophic levels due to energy loss (iv) The length of the food chains may vary from 2 to 8 trophic levels

Which two of the above statements are correct?

A. (I),(IV)

B. (I),(II)

C. (II),(III)

D. (III),(IV)

Answer: C

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16. Biosphere is a global ecosystem composed of living organisms and abiotic factors from which they derive energy and nutrients. And ecosystem is defined as structural and functional unit of the biosphere comprising of living and non-living environment that interact by means of food chains and chemical cycles resulting in energy flow, biotic diversity and material cycling to form a stable, self-supporting system

Which of the following group of organisms are not included in ecological food chain?

A. Carnivores

B. Saprophytes

C. Herbivores

D. Predators

Answer: B

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17. Waste management is essential in today's society. Due to an increase in population, the generation of waste is getting doubled day by day. Moreover, the increase in waste is affecting the lives of many people.

Waste management is the managing of waste by disposal and recycling of it. Moreover, waste management needs proper techniques keeping in mind the environmental situations. For

instance, there are various methods and techniques by which the waste is disposed of. You must have come across 5 R's to save the environment: refuse, reduce, reuse, repurpose and recycle.

Choose the waste management strategy that is matched with correct example

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Waste management is the managing of waste by disposal and recycling of it. Moreover, waste management needs proper techniques keeping in mind the environmental situations. For instance, there are various methods and techniques by which the waste is disposed of. You must have come across 5 R's to save the environment: refuse, reduce, reuse, repurpose and recycle.

Recycling of paper is a good practice but

recycled paper should not be used as food packaging because

A. recycled papers take lots of space

B. recycled papers can't cover food properly

C. recycled papers can cause infection

D. recycled papers are costly

Answer: C

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19. Waste management is essential in today's society. Due to an increase in population, the generation of waste is getting doubled day by day. Moreover, the increase in waste is affecting the lives of many people.

Waste management is the managing of waste by disposal and recycling of it. Moreover, waste management needs proper techniques keeping in mind the environmental situations. For instance, there are various methods and techniques by which the waste is disposed of. You must have come across 5 R's to save the

environment: refuse, reduce, reuse, repurpose and recycle.

According to the 'Solid Waste Management Rule 2016', the waste should be segregated into three categories. Observe the table below and select the row that has correct information

	Wet waste	Dry waste	Hazardous waste
a)	Cooked food, vegetable peels	Used bulbs, fluorescent lamps	Plastic carry bags, bottles, newspaper, cardboard
b)	Coffee and tea powder, garden waste	Plastic carry bags, bottles, newspaper, cardboard	Expired medicines, razors, paint cans
c)	Leftover food, vegetable peels	Coffee and tea powder, garden waste	Insect repellents, cleaning solutions
d)	Uncooked food, tea leaves	Old crockery, frying pans	Coffee and tea powder, garden waste

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20. Waste management is essential in today's society. Due to an increase in population, the generation of waste is getting doubled day by day. Moreover, the increase in waste is affecting the lives of many people.

Waste management is the managing of waste by disposal and recycling of it. Moreover, waste management needs proper techniques keeping in mind the environmental situations. For instance, there are various methods and techniques by which the waste is disposed of. You must have come across 5 R's to save the

environment: refuse, reduce, reuse, repurpose and recycle.

Effective segregation of wastes at the point of generation is very important. Select the appropriate statements giving the importance of waste segregation

i) less waste goes to the landfills ii) better for public health and the environment iii) help in reducing the waste iv) resulting in deterioration of a waste picker's health

A. both (i) and (ii)

B. both (i) and (iii)

C. both (i) and (ii)

D. both (i) and (iv)

Answer: A

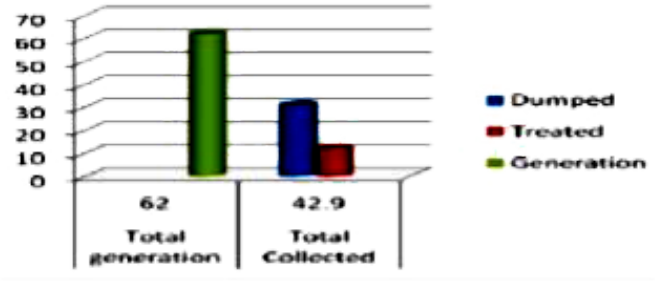
21. Waste management is essential in today's society. Due to an increase in population, the generation of waste is getting doubled day by day. Moreover, the increase in waste is affecting the lives of many people.

Waste management is the managing of waste by

disposal and recycling of it. Moreover, waste management needs proper techniques keeping in mind the environmental situations. For instance, there are various methods and techniques by which the waste is disposed of. You must have come across 5 R's to save the environment: refuse, reduce, reuse, repurpose and recycle.

The given graph shows the amount of waste generated, dumped and treated in percentage. Identify the reason of low success rate of waste

management process.



A. only 15% of urban India's waste is processed

B. less than 60% of waste is collected from households

C. more than 60% of waste is collected from households

D. both (A) and (B)

Answer: D

Watch Video Solution

22. Read the following passage

Human body is made up of five important components, of which water is the main component. Food as well as potable water is essential for every human being. The food is obtained from plants through agriculture, Pesticides are being used extensively for a high yield in the fields. These pesticides are absorbed by the plants from the soil along with water and

minerals and from the water bodies these pesticides are taken up by the aquatic animals and plants. As these chemicals are not biodegradable, they get accumulated progressively at each trophic level. The maximum concentration of these chemicals gets accumulated in our bodies and greatly affects the health of our mind and body.

The maximum concentration of pesticides are found in

A. Man

B. Plants

C. Deer

D. Tiger

Answer: A

Watch Video Solution

23. Read the following passage

Human body is made up of five important components, of which water is the main component. Food as well as potable water is essential for every human being. The food is obtained from plants through agriculture,

Pesticides are being used extensively for a high yield in the fields. These pesticides are absorbed by the plants from the soil along with water and minerals and from the water bodies these pesticides are taken up by the aquatic animals and plants. As these chemicals are not biodegradable, they get accumulated progressively at each trophic level. The maximum concentration of these chemicals gets accumulated in our bodies and greatly affects the health of our mind and body.

Which of these methods could be applied to

reduce our intake of pesticides through food to some extent?

A. Organic farming

B. Mixed cropping

C. Single cell protein

D. Biofortification

Answer: A

Watch Video Solution

24. Read the following passage

Human body is made up of five important components, of which water is the main component. Food as well as potable water is essential for every human being. The food is obtained from plants through agriculture, Pesticides are being used extensively for a high yield in the fields. These pesticides are absorbed by the plants from the soil along with water and minerals and from the water bodies these pesticides are taken up by the aquatic animals and plants. As these chemicals are not

biodegradable, they get accumulated progressively at each trophic level. The maximum concentration of these chemicals gets accumulated in our bodies and greatly affects the health of our mind and body.

Various steps in a food chain represent:

A. Food web

B. Trophic level

C. Ecosystem

D. Biomagnification

Answer: B

Watch Video Solution

25. Read the following passage

Human body is made up of five important components, of which water is the main component. Food as well as potable water is essential for every human being. The food is obtained from plants through agriculture, Pesticides are being used extensively for a high yield in the fields. These pesticides are absorbed by the plants from the soil along with water and minerals and from the water bodies these pesticides are taken up by the aquatic animals

and plants. As these chemicals are not biodegradable, they get accumulated progressively at each trophic level. The maximum concentration of these chemicals gets accumulated in our bodies and greatly affects the health of our mind and body.

With regard to various food chains operating in an ecosystem, man is a:

A. Consumer

B. Producer

C. Producer and consumer

D. Producer and decomposer

Answer: A

26. Read the following passage

Human body is made up of five important components, of which water is the main component. Food as well as potable water is essential for every human being. The food is obtained from plants through agriculture, Pesticides are being used extensively for a high yield in the fields. These pesticides are absorbed by the plants from the soil along with water and

minerals and from the water bodies these pesticides are taken up by the aquatic animals and plants. As these chemicals are not biodegradable, they get accumulated progressively at each trophic level. The maximum concentration of these chemicals gets accumulated in our bodies and greatly affects the health of our mind and body.

First link in any food chain is usually green plants. Which of the following statements gives the correct explanation about the above statement?

A. Only green plants have the capacity to synthesize food using sunlight.

B. There are more herbivores than carnivores in a food chain.

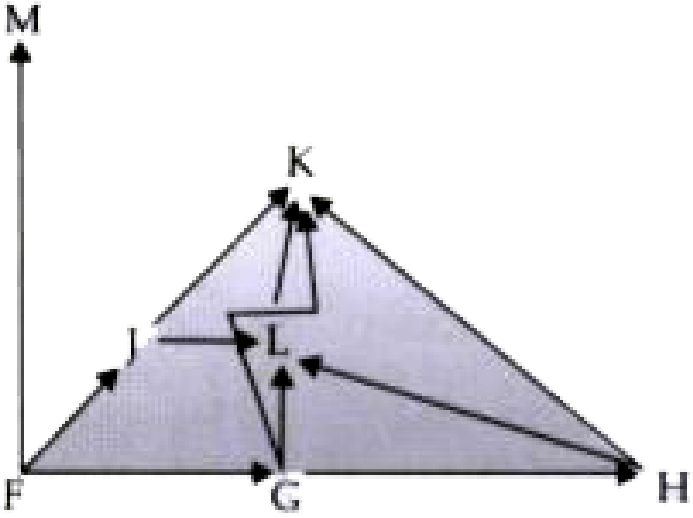
C. Green plants are the only ones fixed at one place in the soil and do not show any kind of movements.

D. Green plants are widely distributed.

Answer: A

 Watch Video Solution

27. Study the following food web



Which of these is the producer?

A. K

B. G

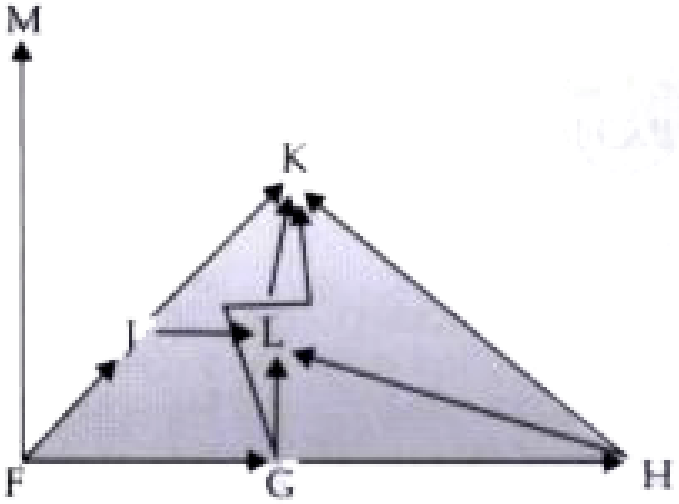
C. J

D. F

Answer: D

Watch Video Solution

28. Study the following food web



Which organisms are primary consumers?

A. F, L, H,K

B. M, G,J,H

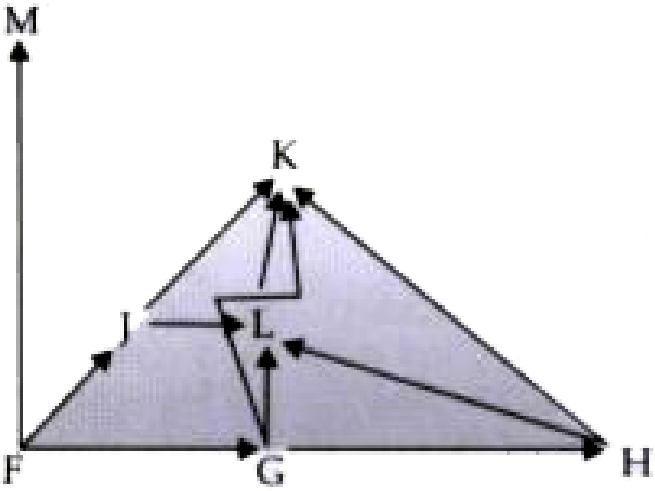
C. J, L, K, M

D. F, K, M,H

Answer: B

 Watch Video Solution

29. Study the following food web



Which organisms will receive maximum energy in the ecosystem?

A. M

B. K

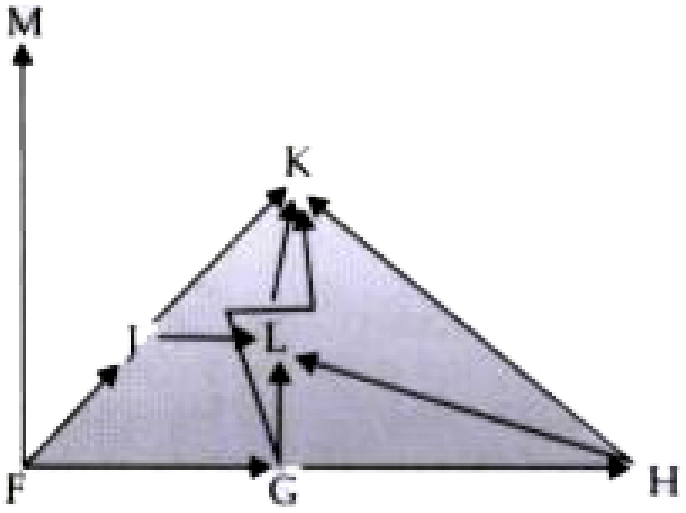
C. F

D. G

Answer: C

Watch Video Solution

30. Study the following food web



Which organisms represent top level carnivores?

A. K

B. M

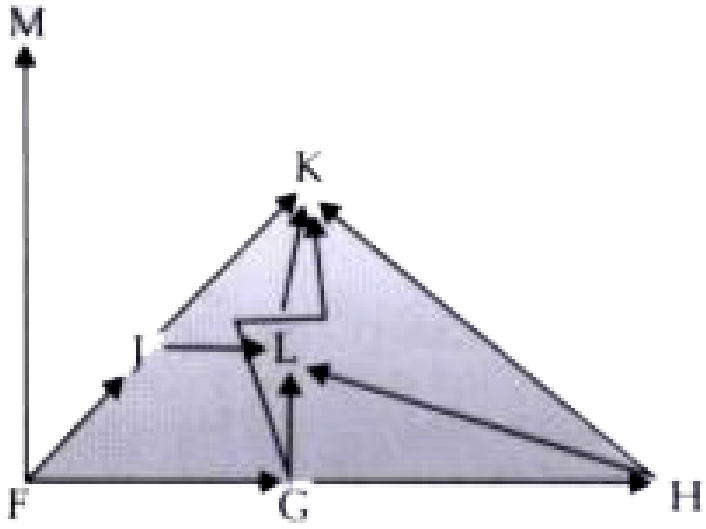
C. G

D. both (A) and (B)

Answer: A

 Watch Video Solution

31. Study the following food web



What will happen if we kill all the organisms in one trophic level ?

A. Population of organisms in previous trophic level will increase.

B. Population of organism in previous trophic level will decrease.

C. Population of organism in next trophic level will increase.

D. This will not affect the population of any trophic level.

Answer: C

 Watch Video Solution

32. A water body characterized by nutrient rich water supports abundant growth of phytoplanktons and other water plants on its surface. Over time, the water body gets filled with a large number of such plants and the process is called Eutrophication. In such water bodies, dissolved oxygen content is nil or very less.

Eutrophicated water usually looks turbid green in colour because of

A. Excessive growth of phytoplanktons

B. Accumulation of minerals and nutrients

C. Water body becoming polluted

D. Release of degraded plant chlorophyll in water

Answer: A

33. A water body characterized by nutrient rich water supports abundant growth of phytoplanktons and other water plants on its surface. Over time, the water body gets filled

with a large number of such plants and the process is called Eutrophication. In such water bodies, dissolved oxygen content is nil or very less.

In eutrophicated water body, growth rate of phytoplankton is high because of:

A. Light penetrating the lower surfaces of water body

B. Enrichment of nutrients in the water body

C. Less of dissolved oxygen in the water body.

D. Aquatic fauna flourishes well in eutrophicated water body

Answer: B

34. A water body characterized by nutrient rich water supports abundant growth of phytoplanktons and other water plants on its surface. Over time, the water body gets filled with a large number of such plants and the process is called Eutrophication. In such water

bodies, dissolved oxygen content is nil or very less.

There is an extremely low level of dissolved oxygen in a eutrophicated water body because:

A. Excessive growth of bacterial decomposers feeding on dead material which consume the dissolved oxygen

B. Plants grow to such a great extent that they do not allow free flow of water hence oxygen in the atmosphere does not get mixed with water.

C. The dissolved oxygen in water reacts with minerals and nutrients to form compounds and hence greatly reduces the quantity of oxygen.

D. Oxygen released is consumed by fishes in the eutrophicated water and hence the quantity of dissolved oxygen is very low.

Answer: A

Watch Video Solution

35. A water body characterized by nutrient rich water supports abundant growth of phytoplanktons and other water plants on its surface. Over time, the water body gets filled with a large number of such plants and the process is called Eutrophication. In such water bodies, dissolved oxygen content is nil or very less.

A portion of a river is covered with a green layer of tiny floating organisms L on its surface and the pond water also contains organisms like tadpole, small fish, Alligator. Which of the

following is the correct food chain for the above organisms?

A. Algae $\rightarrow$ Tadpole $\rightarrow$ Small fish $\rightarrow$ Alligator

B. Tadpole $\rightarrow$ Small fish $\rightarrow$ Algae $\rightarrow$ Alligator

C. Algae $\rightarrow$ Tadpole $\rightarrow$ Alligator $\rightarrow$ Small fish

D. Algae $\rightarrow$ Alligator $\rightarrow$ Small fish $\rightarrow$ Tadpole

Answer: A

36. A water body characterized by nutrient rich water supports abundant growth of phytoplanktons and other water plants on its surface. Over time, the water body gets filled with a large number of such plants and the process is called Eutrophication. In such water bodies, dissolved oxygen content is nil or very less.

Which of the following steps are used to treat

industrial wastes and reduce pollution?

(i) Recycle the wastes

(ii) Discharge the wastes into the sea

(iii) Treat and neutralise harmful chemicals in the wastes

A. Only (i) and (ii)

B. Only (i) and (ii)

C. Only (ii) and (iii)

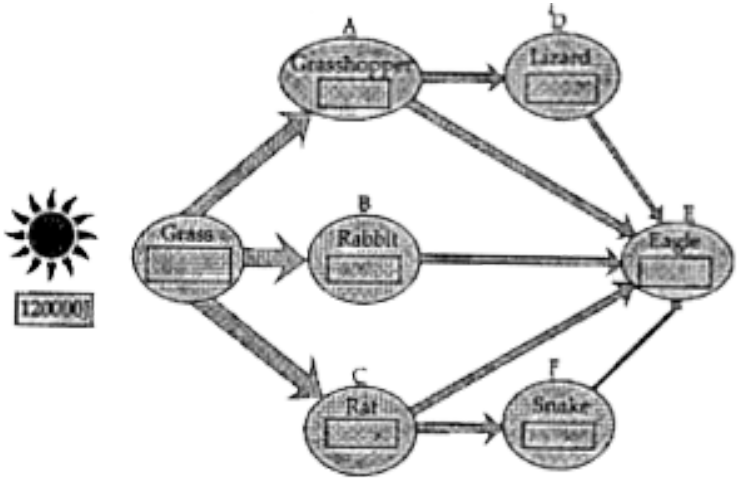
D. All the these

Answer: A

 Watch Video Solution

37. Food chains and the energy flow within an ecosystem provide an important understanding of contingencies and mutual dependencies of organisms. The given below flow chart depicts the energy flow within some members of a grassland ecosystem. The grass in the below ecosystem transducer 120,000 J of sunlight and fixes it into 12,000 J of energy. It is established that 90% of the energy of one trophic level is not passed to the next trophic level. Further assume that the energy transferred from one trophic level to the next is equally shared among the

different organisms at that trophic level.



How many food chains are present in the food web depicted above?

A. 2

B. 3

C. 5

D. 6

Answer: C

Watch Video Solution

38. Food chains and the energy flow within an ecosystem provide an important understanding of contingencies and mutual dependencies of organisms. The given below flow chart depicts the energy flow within some members of a grassland ecosystem. The grass in the below ecosystem transducer 120,000 J of sunlight and fixes it into 12,000 J of energy. It is established that 90% of the energy of one trophic level is not

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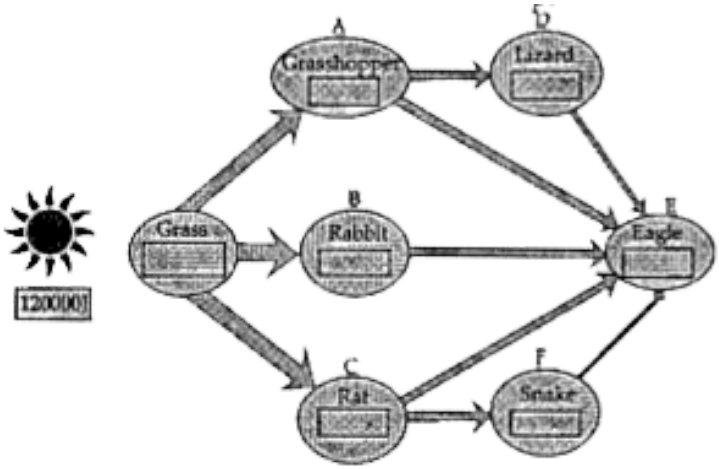


Based on the above information, indicate the amount of energy that an organism C may have received from an organism from the previous trophic level.

A. 1,20,000 J

B. 12,000 J

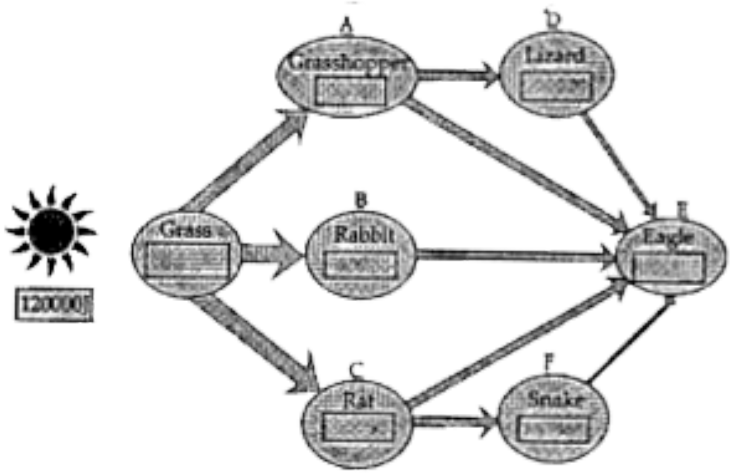
C. 1200 J

D. 120 J

Answer: C

39. Food chains and the energy flow within an ecosystem provide an important understanding of contingencies and mutual dependencies of

organisms. The given below flow chart depicts the energy flow within some members of a grassland ecosystem. The grass in the below ecosystem transducer 120,000 J of sunlight and fixes it into 12,000 J of energy. It is established that 90% of the energy of one trophic level is not passed to the next trophic level. Further assume that the energy transferred from one trophic level to the next is equally shared among the different organisms at that trophic level.



In the food web depicted above, identify the most energy efficient link for tertiary consumer.

A. Rabbit

B. Rat

C. Lizard

D. Grasshopper

Answer: A

Watch Video Solution

40. Food chains and the energy flow within an ecosystem provide an important understanding of contingencies and mutual dependencies of organisms. The given below flow chart depicts the energy flow within some members of a grassland ecosystem. The grass in the below ecosystem transducer 120,000 J of sunlight and fixes it into 12,000 J of energy. It is established that 90% of the energy of one trophic level is not passed to the next trophic level. Further assume

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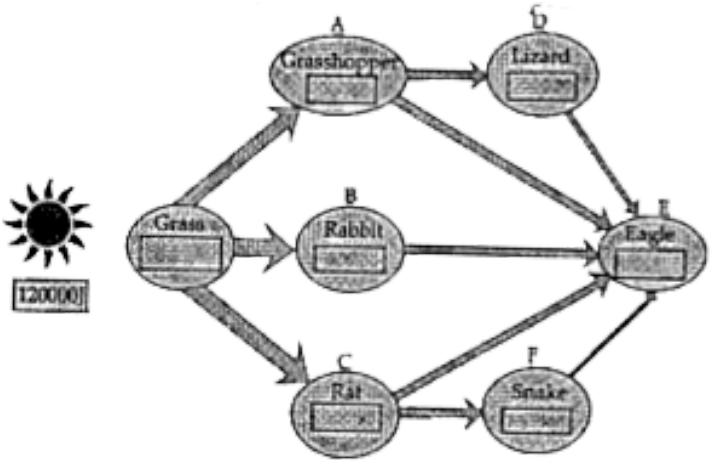

Which organism acts as both the secondary consumer and the tertiary consumer?

A. Snake

B. Eagle

C. Chicken

D. Rat

Answer: B

Watch Video Solution

41. Food chains and the energy flow within an ecosystem provide an important understanding of contingencies and mutual dependencies of organisms. The given below flow chart depicts the energy flow within some members of a grassland ecosystem. The grass in the below ecosystem transducer 120,000 J of sunlight and

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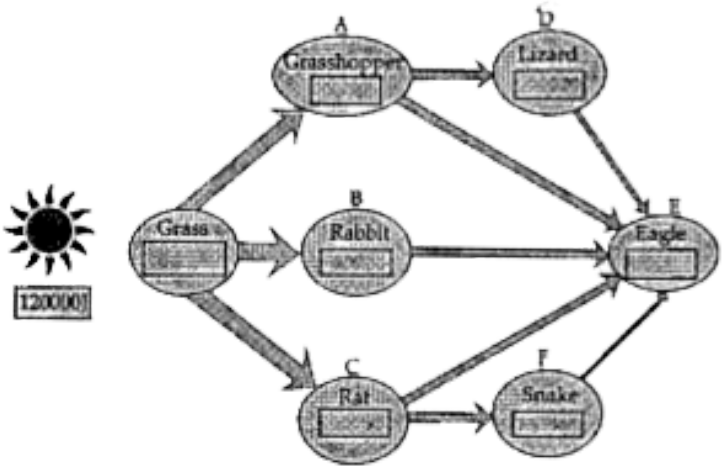

Tropic levels are formed by which of the following components?

A. Only plants

B. Only animals

C. Only carnivores

D. Organisms linked in food chain

Answer: D

42. A farmer is growing a crop regularly in his field. He uses chemical fertilizers, pesticides, organic manure as well as bio-fertilizers. Very

close to his field is a factory which emits smoke as a by product. There is also a huge lake in the nearby area.

A considerable increase in plant life in the lake was noticed after the farming activity intensified. The most likely reason for this could be:

A. Chemical fertilizers leached into the lake from the field.

B. Pesticides leached into the lake from the field.

C. Organic manure leached into the lake from the field.

D. Smoke particles from the industry got settled in moist surroundings of the lake.

Answer: A

43. A farmer is growing a crop regularly in his field. He uses chemical fertilizers, pesticides, organic manure as well as bio-fertilizers. Very

close to his field is a factory which emits smoke as a by product. There is also a huge lake in the nearby area.

Consider the following food chain in the same lake.

Aquatic plant $\rightarrow$ Small fish $\rightarrow$ Big fish $\rightarrow$ Birds

Which of the above organisms is likely to show minimum amount of pesticide concentration in them after considerable time?

A. Aquatic plants.

B. Small fish.

C. Big fish.

D. Birds.

Answer: A

Watch Video Solution

44. A farmer is growing a crop regularly in his field. He uses chemical fertilizers, pesticides, organic manure as well as bio-fertilizers. Very close to his field is a factory which emits smoke as a by product. There is also a huge lake in the nearby area.

_____ is the increase in the concentration of harmful chemical substances in the body of living organisms.

A. Biological oxygen demand

B. Biomagnification

C. Biosynthesis

D. Biogeochemical cycle

Answer: B

Watch Video Solution

45. A farmer is growing a crop regularly in his field. He uses chemical fertilizers, pesticides, organic manure as well as bio-fertilizers. Very close to his field is a factory which emits smoke as a by product. There is also a huge lake in the nearby area.

An expert agriculturist suggests to the farmer to minimize the use of chemical fertilizers and instead use biofertilizers as they have many advantages over chemical fertilizers. Which of the following is NOT true for biofertilizers?

A. They are economical

B. They help in reducing pollution in the lake

C. They are renewable

D. They require large set-up for their production.

Answer: D

Watch Video Solution

46. A farmer is growing a crop regularly in his field. He uses chemical fertilizers, pesticides, organic manure as well as bio-fertilizers. Very

close to his field is a factory which emits smoke as a by product. There is also a huge lake in the nearby area.

Which of these is a way to prevent accumulation of harmful chemicals in our bodies ?

A. Minimize the use of pesticides in agriculture

B. Minimize the use of CFCs.

C. Plant more and more trees.

D. All of these

Answer: A

Watch Video Solution

47. The activities of man had adverse effects on all forms of living organisms in the biosphere. Unlimited exploitation of nature by man disturbed the delicate ecological balance between the living and non-living components of the biosphere. The unfavourable conditions created by man himself threatened the survival not only of him but also of the entire living organisms on the mother earth. One of your classmates is an active member of 'Eco club' of

your school which is creating environmental awareness amongst the school students, spreading the same in the society and also working hard for preventing environmental degradation of the surroundings.

Which of the following does NOT exist in a balanced ecosystem?

A. Interconnected food chains

B. Interdependence among living organisms and the environment

C. Animals dependent on plants but plants are not dependent on animals

D. Communities made up of different populations of organisms

Answer: C

48. The activities of man had adverse effects on all forms of living organisms in the biosphere. Unlimited exploitation of nature by man disturbed the delicate ecological balance between the living and non-living components of the biosphere. The unfavourable conditions

created by man himself threatened the survival not only of him but also of the entire living organisms on the mother earth. One of your classmates is an active member of 'Eco club' of your school which is creating environmental awareness amongst the school students, spreading the same in the society and also working hard for preventing environmental degradation of the surroundings.

The green dustbin signifies:

A. Non-biodegradable waste

B. Biodegradable waste

C. Plastic waste

D. Garbage

Answer: B

49. The activities of man had adverse effects on all forms of living organisms in the biosphere. Unlimited exploitation of nature by man disturbed the delicate ecological balance between the living and non-living components of the biosphere. The unfavourable conditions

created by man himself threatened the survival not only of him but also of the entire living organisms on the mother earth. One of your classmates is an active member of 'Eco club' of your school which is creating environmental awareness amongst the school students, spreading the same in the society and also working hard for preventing environmental degradation of the surroundings.

Degradation of non-biodegradable waste is difficult because :

A. Non-biodegradable wastes cannot be recycled.

B. Microorganisms cannot decompose it.

C. They can be made into organic wastes.

D. All of the above

Answer: B

Watch Video Solution

50. The activities of man had adverse effects on all forms of living organisms in the biosphere.

Unlimited exploitation of nature by man disturbed the delicate ecological balance between the living and non-living components of the biosphere. The unfavourable conditions created by man himself threatened the survival not only of him but also of the entire living organisms on the mother earth. One of your classmates is an active member of 'Eco club' of your school which is creating environmental awareness amongst the school students, spreading the same in the society and also working hard for preventing environmental degradation of the surroundings.

Which of these group(s) contains only non biodegradable items?

(i) Wood, paper, leather

(ii) Polythene, detergent, PVC

(iii) Plastic, detergent, grass

(iv) Plastic, bakelite, DDT

A. (iii)

B. (iv)

C. (i) and (iii)

D. (ii) and (iv)

Answer: D

Watch Video Solution

51. The activities of man had adverse effects on all forms of living organisms in the biosphere. Unlimited exploitation of nature by man disturbed the delicate ecological balance between the living and non-living components of the biosphere. The unfavourable conditions created by man himself threatened the survival not only of him but also of the entire living organisms on the mother earth. One of your classmates is an active member of 'Eco club' of your school which is creating environmental

awareness amongst the school students, spreading the same in the society and also working hard for preventing environmental degradation of the surroundings.

We should minimize the use of disposable plastic bags as

A. they are made of materials with light weight

B. they are made of toxic materials

C. they are made of biodegradable materials

D. they are made of non-biodegradable materials

Answer: D

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Self Assessment 1 Objective Type Questions Mulitiple Choice Questions

1. The animals which occupy the same trophic level are:

A. Lion and bees

B. Deer and bees

C. Snakes and earthworm

D. Crow and cow AM

Answer:

Watch Video Solution

2. The energy flow in an ecosystem is :

A. Multidirectional

B. Unidirectional

C. Bidirectional

D. Circular

Answer:

Watch Video Solution

3. Tropic levels are formed by which of the following components?

A. Only plants

B. Only animals

C. Only carnivores

D. Organisms linked in food chain

Answer:

Watch Video Solution

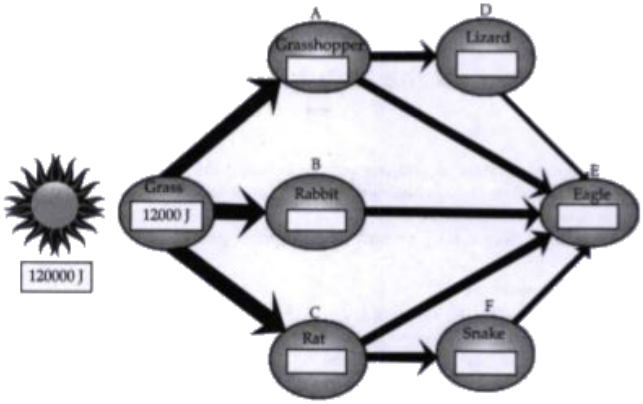
Self Assessment 1 Objective Type Questions Passage Diagram Based Questions

1. Read the given passage and answer the following questions :

Food chains and the energy flow within an

ecosystem provide an important understanding of contingencies and mutual dependencies of organisms. The flow chart given below, depicts the energy flow within some members of a grassland ecosystem. The grass in the below ecosystem transduces 120,000 J of sunlight and fixes it into 12,000 J of energy. It is established that 90% of the energy of one trophic level is not passed to the next trophic level. Further assume that the energy transferred from one trophic level to the next is equally shared among the different organisms at that trophic level. Based on the information given and your knowledge,

answer the following questions.



How many food chains are present in the food web depicted above?

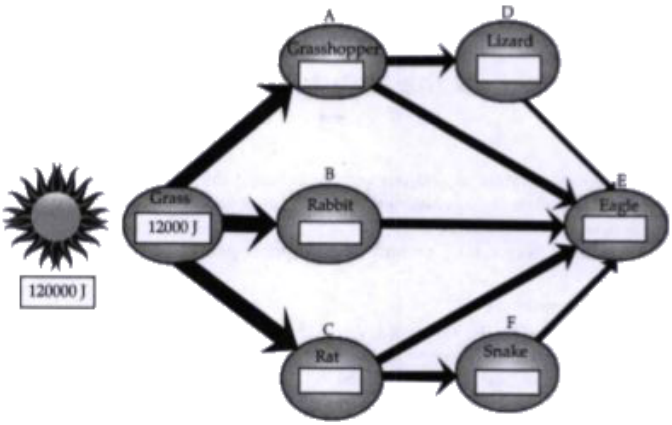
Watch Video Solution

2. Read the given passage and answer the following questions :

Food chains and the energy flow within an

ecosystem provide an important understanding of contingencies and mutual dependencies of organisms. The flow chart given below, depicts the energy flow within some members of a grassland ecosystem. The grass in the below ecosystem transduces 120,000 J of sunlight and fixes it into 12,000 J of energy. It is established that 90% of the energy of one trophic level is not passed to the next trophic level. Further assume that the energy transferred from one trophic level to the next is equally shared among the different organisms at that trophic level. Based on the information given and your knowledge,

answer the following questions.



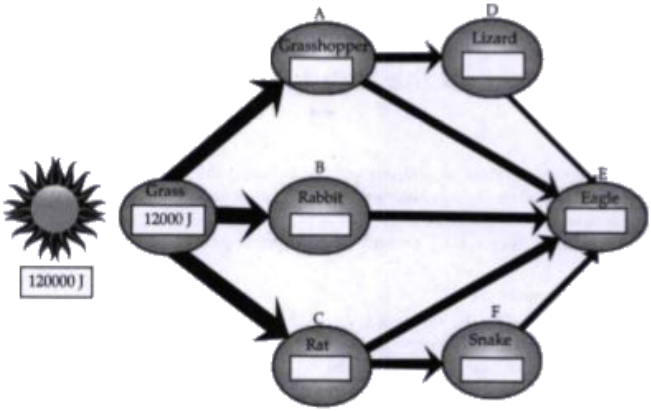
Based on the above information, indicate the amount of energy that an organism (A to F) may have received from an organism from the previous trophic level.

Watch Video Solution

3. Read the given passage and answer the following questions :

Food chains and the energy flow within an ecosystem provide an important understanding of contingencies and mutual dependencies of organisms. The flow chart given below, depicts the energy flow within some members of a grassland ecosystem. The grass in the below ecosystem transduces 120,000 J of sunlight and fixes it into 12,000 J of energy. It is established that 90% of the energy of one trophic level is not passed to the next trophic level. Further assume

that the energy transferred from one trophic level to the next is equally shared among the different organisms at that trophic level. Based on the information given and your knowledge, answer the following questions.



In the food web depicted above, identify the most energy efficient link for tertiary consumer.

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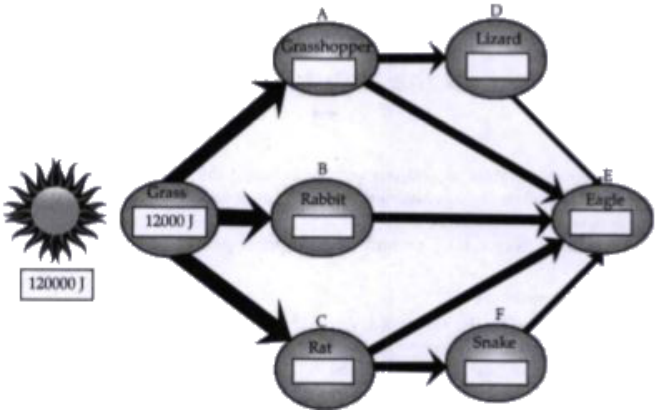
4. Read the given passage and answer the following questions :

Food chains and the energy flow within an ecosystem provide an important understanding of contingencies and mutual dependencies of organisms. The flow chart given below, depicts the energy flow within some members of a grassland ecosystem. The grass in the below ecosystem transduces 120,000 J of sunlight and fixes it into 12,000 J of energy. It is established that 90% of the energy of one trophic level is not passed to the next trophic level. Further assume that the energy transferred from one trophic

level to the next is equally shared among the different organisms at that trophic level. Based on the information given and your knowledge, answer the following questions.



The first trophic level in a food chain is always a green plant. Why?

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Self Assessment 1 Objective Type Questions Assertion And Reason Type Questions

1. Assertion : Decomposers keep the environment clean.

Reason: They recycle matter by breaking down the organic remains and waste products of plants and animals.

A. Both assertion (A) are reason (R) are true and reason (R) is the correct explanation of assertion (A) .

B. Both assertion (A) and (R) are the but reason (R) is not be correct explanation of assertion (A) .

C. Assertion (A) is true but reason (R) is false .

D. Assertion (A) is false but reason (R) is true .

Answer:

Watch Video Solution

2. Assertion : First trophic level in a food chain is always a green plant.

Reason: Green plants are called producers.

A. Both assertion (A) are reason (R) are true and reason (R) is the correct explanation of assertion (A) .

B. Both assertion (A) and (R) are the but reason (R) is not be correct explanation of assertion (A) .

C. Assertion (A) is true but reason (R) is false .

D. Assertion (A) is false but reason (R) is true

.

Answer:

Watch Video Solution

Self Assessment 1 Objective Type Questions Very Short Answer Type Questions

1. In the following food chain, grass provides 4000 J of energy to the grasshopper. Grass,

Grasshopper, Frogs, Snakes. How much energy will be available to snakes and frogs ?

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2. What will happen if we kill all the organisms in one trophic level?

Watch Video Solution

3. Pesticides added to a field are seen in increased amount in the crop and in the birds

that feed on them. What is this phenomenon called?

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Self Assessment 1 Objective Type Questions Short Answer Type Questions

1. Create a terrestrial food chain depicting four trophic levels.

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2. Why do we not find food chains of more than four trophic levels in nature?

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3. How will you create an artificial aquatic ecosystem, which is self-sustainable?

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4. The flow of energy between various components of the environment has been

extensively studied. Give an outline of the findings.

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Self Assessment 2 Objective Type Questions Multiple Choice Questions

1. It is difficult to degrade non-biodegradable wastes because :

A. non-biodegradable wastes cannot be recycled.

B. microorganisms cannot decompose it.

C. they can be made into organic wastes.

D. all of the above

Answer:

2. The disease caused due to the depletion of ozone layer is

A. Throat cancer

B. Skin cancer

C. Blood cancer

D. Oral cancer

Answer:

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Self Assessment 2 Objective Type Questions Passage Diagram Based Questions

1. Study the passage and answer the following questions:

The activities of man had adverse effects on all

forms of living organisms in the biosphere.

Unlimited exploitation of nature by man disturbed the delicate ecological balance between the living and non-living components of the biosphere. The unfavourable conditions created by man himself threatened the survival not only of him but also of the entire living organisms on the mother earth. One of your classmates is an active member of 'Eco club' of your school which is creating environmental awareness amongst the school students, spreading the same in the society and also working hard for preventing environmental

degradation of the surroundings.

Why is it necessary to conserve our environment?

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2. Study the passage and answer the following questions:

The activities of man had adverse effects on all forms of living organisms in the biosphere.

Unlimited exploitation of nature by man disturbed the delicate ecological balance between the living and non-living components of

the biosphere. The unfavourable conditions created by man himself threatened the survival not only of him but also of the entire living organisms on the mother earth. One of your classmates is an active member of 'Eco club' of your school which is creating environmental awareness amongst the school students, spreading the same in the society and also working hard for preventing environmental degradation of the surroundings.

What does the green and blue dustbin signify?

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3. Study the passage and answer the following questions:

The activities of man had adverse effects on all forms of living organisms in the biosphere.

Unlimited exploitation of nature by man disturbed the delicate ecological balance between the living and non-living components of the biosphere. The unfavourable conditions created by man himself threatened the survival not only of him but also of the entire living organisms on the mother earth. One of your classmates is an active member of 'Eco club' of your school which is creating environmental

awareness amongst the school students, spreading the same in the society and also working hard for preventing environmental degradation of the surroundings.

State the importance of green and blue dustbins in the safe disposal of the household waste.

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Self Assessment 2 Objective Type Questions Assertion And Reason Type Questions

1. Assertion (A): Polythene bags and plastic containers are non-biodegradable substances.

Reason (R): They can be broken down by micro organisms in natural simple harmless substances.

A. Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).

B. Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).

C. Assertion (A) is true but reason (R) is false.

D. Assertion (A) is false but reason (R) is true.

Answer:

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2. Assertion : Ozone is both beneficial and damaging. Reason: Stop the release of chlorofluorocarbons to protect the ozone.

A. Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of

assertion (A).

B. Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).

C. Assertion (A) is true but reason (R) is false.

D. Assertion (A) is false but reason (R) is true.

Answer:

Self Assessment 2 Objective Type Questions Very Short Answer Type Questions

1. Write the full name of the group of compounds mainly responsible for the depletion of ozone layer.

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2. Why should biodegradable and non-biodegradable wastes be discarded in two different dustbins ?

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Watch Video Solution

3. List two non-biodegradable wastes generated daily in kitchen which can be recycled.

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Self Assessment 2 Objective Type Questions Short Answer Type Questions

1. How is ozone both beneficial and damaging? How can we prevent the damaging effect of ozone?

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Self Assessment 2 Objective Type Questions Long Short Answer Type Questions

1. (a) "Improvements in our lifestyle have resulted in greater amounts of waste generation". Give two examples to support the given statement. Suggest one change that we can incorporate in our lifestyle in order to reduce non-biodegradable waste.

(b) The following organisms form a food chain.

Write the food chain.

Insect, Hawk, Grass, Snake, Frog

Which of these will have highest concentration of non-biodegradable chemicals?

Name the phenomenon.

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2. The following organisms form a food chain. Insect, Hawk, Grass, Snake, Frog Which of these will have highest concentration of non-biodegradable chemicals? Name the phenomenon.

Watch Video Solution

Ncert Corner Intext Questions

1. What are tropic levels ? Give an example of a food chain and state the different trophic levels in it.

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2. What is the role of decomposers in the ecosystem?

Watch Video Solution

3. Why are some substances biodegradable and some non-biodegradable?

Watch Video Solution

4. Give any two ways in which biodegradable substances would affect the environment

Watch Video Solution

5. Give any two ways in which non-biodegradable substances would affect the environment

Watch Video Solution

6. What is ozone and how does it affect any ecosystem?

Watch Video Solution

7. How can you help in reducing the problem of waste disposal? Give any two methods

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Ncert Corner Exercise Questions

1. Which of the following groups contain only biodegradable items?

A. Grass, flowers and leather

B. Grass, wood and plastic

C. Fruit-peels, cake and lime-juice

D. Cake, wood and grass

Answer: C

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2. Which of the following constitute a food-chain?

A. Grass, wheat and mango

B. Grass, goat and human

C. Goat, cow and elephant

D. Grass, fish and goat

Answer: B

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3. Which of the following are environment-friendly practices?

A. Carrying cloth-bags to put purchases in while shopping

B. Switching off unnecessary lights and fans

C. Walking to school instead of getting your mother to drop you on her scooter

D. All of the above

Answer: D

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4. What will happen if we kill all the organisms in one trophic level?

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5. Will the impact of removing all the organisms in a trophic level be different for different trophic levels? Can the organisms of any trophic level be removed without causing any damage to the ecosystem?

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6. What is biological magnification? Will the levels of this magnification be different at different levels of the ecosystem?

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7. What are the problems caused by the non-biodegradable wastes that we generate?

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8. If all the waste we generate is biodegradable, will this have no impact on the environment?

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9. Why is damage to the ozone layer a cause for concern? What steps are being taken to limit this damage?

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Ncert Exemplar Multiple Choice Questions

1. Which one of the following is an artificial ecosystem ?

A. Pond

B. Crop field

C. Lake

D. Forest

Answer: B

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2. In a food chain, the third trophic level is always occupied by

A. carnivores

B. herbivores

C. decomposers

D. producers

Answer: A

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3. An ecosystem includes :

A. all living organisms.

B. non-living objects.

C. both living organisms and non-living objects.

D. sometimes living organisms and sometimes non- living objects.

Answer: C

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4. In the given food chain, suppose the amount of energy at fourth trophic level is 5 kJ, what will be the energy available at the producer level ?

$\text{Grass} \rightarrow \text{Grasshopper} \rightarrow \text{Frog} \rightarrow \text{Snake} \rightarrow \text{Hawk}$

A. 5kJ

B. 50 kJ

C. 500 kJ

D. 5,000 kJ

Answer: D

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5. Accumulation of non-biodegradable pesticides in the food chain in increasing amount at each higher trophic level is known as

A. eutrophication

B. pollution

C. bio-magnification

D. accumulation

Answer: C

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6. Depletion of ozone is mainly due to

A. chlorofluorocarbon compounds.

B. carbon monoxide.

C. methane

D. pesticides

Answer: A

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7. Organisms which synthesise carbohydrates from inorganic compounds by using radiant energy are called :

A. decomposers

B. producers

C. herbivores

D. carnivores

Answer: B

Watch Video Solution

8. In an ecosystem, the 10% of energy available for transfer from one trophic level to the next is in the form of

A. heat energy

B. light energy

C. chemical energy

D. mechanical energy

Answer: C

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9. Organisms of a higher trophic level which feed on several types of organisms belonging to a lower trophic level constitute the

A. food web

B. ecological pyramid

C. ecosystem ecosystem

D. food chain

Answer: A

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10. Flow of energy in an ecosystem is always

A. unidirectional

B. bidirectional

C. multi directional

D. no specific direction

Answer: A

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11. Excessive exposure of human to UV-rays results in

(i) damage to immune system, (ii) damage to lungs

(iii) skin cancer, (iv) peptic ulcers

A. (i) and (ii)

B. (ii) and (iv)

C. (i) and (iii)

D. (iii) and (iv)

Answer: C

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12. In the following groups of materials, which group(s) contains only non-biodegradable items ?

(i) Wood, paper, leather , (ii) Polythene, detergent, PVC

Plastic, detergent, grass , (iv) Plastic, bakelite, DDT

A. (iii)

B. (iv)

C. (i) and (iii)

D. (ii) and (iv)

Answer: D

13. Which of the following limits the number of trophic levels in a food chain ?

A. Decrease in energy at higher trophic levels

B. Sufficient food supply

C. Polluted air

D. Water

Answer: A

14. Which of the following statement is incorrect?

A. All green plants and blue green algae are producers

B. Green plants get their food from organic compounds.

C. Producers prepare their own food from inorganic compounds.

D. Plants convert solar energy into chemical energy.

Answer: B

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15. Which group of organisms are not constituents of a food chain ?

(i) Grass, lion, rabbit, wolf

(ii) Plankton, man, fish, grasshopper

(iii) Wolf, grass, snake, tiger

(iv) Frog, snake, eagle, grass, grasshopper

A. (i) and (iii)

B. (iii) and (iv)

C. (ii) and (iii)

D. (i) and (iv)

Answer: C

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16. The percentage of solar radiation absorbed by all the green plants for the process of photosynthesis is about

A. 0.01

B. 0.05

C. 0.08

D. 0.1

Answer: A

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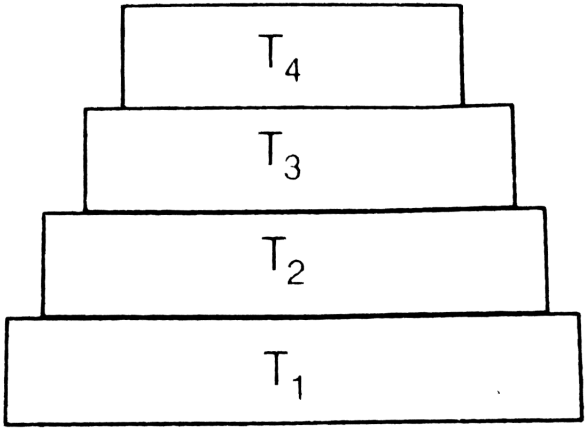
17. In the given figure, the various trophic levels are shown in a pyramid. At which trophic level is maximum energy available ?



A. T4

B. T_2

C. T1

D. T_3

Answer: C

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18. What will happen if deer is missing in the food chain given below ?

Grass $\rightarrow$ Deer $\rightarrow$ Tiger

A. The population of tiger increases.

B. The population of grass decreases.

C. Tiger will start eating grass.

D. The population of tiger decreases and the population of grass increases.

Answer: D

19. The decomposers in an ecosystem :

A. convert inorganic material, to simpler forms.

B. convert organic material to inorganic forms.

C. convertinorganic materials into organic compounds.

D. do not breakdown organic compounds.

Answer: B

20. If a grasshopper is eaten by a frog, then the energy transfer will be from

A. producer to decomposer

B. producer to primary consumer

C. primary consumer to secondary consumer

D. secondary consumer to primary consumer

Answer: C

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21. Disposable plastic plates should not be used because :

A. they are made of materials with light weight.

B. they are made of toxic materials.

C. they are made of biodegradable materials.

D. they are made of non-biodegradable materials.

Answer: D

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Ncert Exemplar Short Answer Questions

1. Why is improper disposal of waste a curse to environment ?

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2. Write the common food chain of a pond ecosystem.

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3. What are the advantage of cloth bags over plastic bags during shopping ?

Watch Video Solution

4. Why are crop fields known as artificial ecosystem ?

Watch Video Solution

5. Differentiate between biodegradable and non biodegradable substances with examples.

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6. Suggest one word for each of the following statements/definitions :

A. The physical and biological world where we live in

B. Each level of food chain where transfer of energy takes place.

C. The physical factors like temperature, rainfall, wind and soil of an ecosystem.

D. Organisms which depend on the producers either directly or indirectly for food.

Answer:

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7. What is the role of decomposers in the ecosystem?

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8. Select the mismatched pair in the following and correct it.

A. Bio-magnification – Accumulation of chemicals at the successive trophic levels of a food chain

B. Ecosystem – Biotic components of environment

C. Aquarium - A man-made ecosystem

D. Parasites - Organisms which obtain food from other living organisms

Answer:

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9. We do not clean ponds or lakes, but an aquarium needs to be cleaned. Why ?

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10. Indicate the flow of energy in an ecosystem. Why is it unidirectional ?

Justify.

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11. What are decomposer ? What will be the consequence of their absence in an ecosystem ?

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12. Suggest any four activities in daily life which are eco-friendly.

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13. Give two differences between food chain and food web.

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14. Name the wastes which are generated in your house daily. What measures would you take for their disposal?

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15. Suggest suitable mechanism(s) for waste management in fertilier industries.

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16. What are the by-products of fertiliser industries ? How do they affect the environment ?

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17. Explain some harmful effects of agricultural practices on the environment.

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Board Corner Very Short Answer Type Questions

1. What is an ecosystem ?

2. Why is forest considered a natural ecosystem ?

3. Why is a lake considered to be a natural ecosystem?

4. In the following food chain, 100 J of energy is available to the lion. How much energy was available to the producer?

Plants $\rightarrow$ Deer $\rightarrow$ Lion

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5. In the following food chain, plants provide 500 J of energy to rats. How much energy will be available to hawks from snakes ?

Plants $\rightarrow$ Rats Snakes $\rightarrow$ Hawks

A. 400J

B. 50J

C. 5J

D. 0.5J

Answer: C

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6. In the following food chain, 20,000 J of energy was available to the plants. How much energy

would be available to man in this chain ?

Plants $\rightarrow$ Sheep $\rightarrow$ Man

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Board Corner Short Answer Type Questions

1. How can we help in reducing the problem of waste disposal? Suggest any three methods.

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2. Define an ecosystem. Draw a block diagram to show the flow of energy in an ecosystem.

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3. Write the essential function performed by ozone at the higher levels of the Earth's atmosphere? How is it produced ? Name the synthetic chemicals mainly responsible for the drop of amount of ozone in the atmosphere. How can the use of these chemicals be reduced ?

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4. Define a food chain. Design a terrestrial food chain of four trophic levels. If a pollutant enters at the producer level, the organisms of which trophic level will have the maximum concentration of the pollutant in their bodies ? What is this phenomenon called ?

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5. Students in a school listened to the news read in the morning assembly that the mountain of garbage in Delhi, suddenly exploded and various

vehicles got buried under it. Several people were also injured and there was a traffic jam all around. In the brainstorming session, the teacher also discussed this issue and asked the students to find out a solution to the problem of garbage. Finally, they arrived at two main points - one is self-management of the garbage we produce and the second is to generate less garbage at an individual level.

(a) Suggest two measures to manage the garbage we produce. (b) As an individual, what can we do to generate the least garbage? Give two points

Watch Video Solution

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List two values the teacher instilled in his students in this episode.

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8. You have been selected to talk on "ozone layer and its protection" in the school assembly on 'Environment Day'.

(i) Why should ozone layer be protected to save the environment?

(ii) List any two ways that you would stress in your talk to bring in awareness amongst your fellow friends that would also help in protection of ozone layer as well as the environment.

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