



BIOLOGY

BOOKS - BHARATI BHAWAN BIOLOGY (HINGLISH)

OUR ENVIRONMENT

Very Short Answer Questions

1. What is an ecosystem ?

2. Categorize these as primary, secondary and

tertiary consumers, grasshopper, snake, hawk,

owl, rat and rabbit.

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3. Give a scientific term for each of the following.

(a) The green plants which synthesize food

(b) Organisms which feed on plants or plant

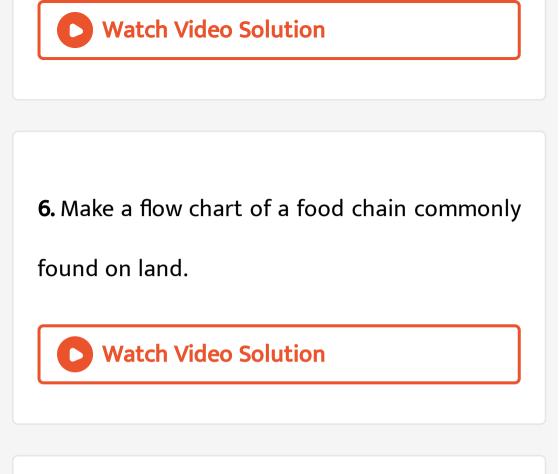
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(c) Organisms that can convert dead and decaying organic matter into simpler form.
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4. Give one example of a simple food chain.

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5. Which category of organisms forms the starting point of a food chain ?



7. Define food web.

8. One hundred kilocalories of energy are available to a trophic level. Approximately how much energy can be transferred to the next higher trophic level?

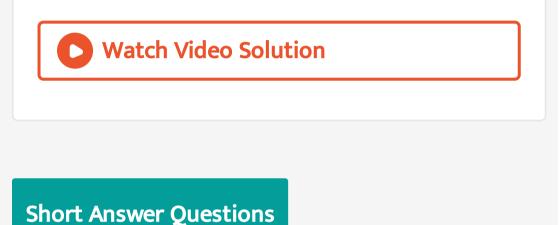
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9. Food chains usually do not have more than

four trophic levels. Why?

10. Name one catogory of chemicals that are

responsible for the ozone hole.



1. Describe the components of an ecosystem.

2. How are heterotrophs different from autotrophs?
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3. What is the importance of decomposers in

an ecosystem?

4. Why do you need to clean an aquarium periodically while ponds do not need to be cleaned?



5. What do you understand by a trophic level?



6. What will happen if we kill all the organisms

in one trophic level?

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7. In what direction does the energy flow in a

food chain? Why as it unidirectional?

8. Usually, why do you have a greater number

of organisms at the lower trophic levels?

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9. Construct a food web that has rabbits, plants, herbivorous insects, hawks, sparrows, wolves, spiders, frogs and snakes.

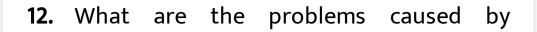


10. Where is the ozone layer found? What is

the importance of ozone layer?

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11. How is ozone formed in the upper atmosphere? Why is damage to the ozone layer a cause of concern to us. What causes this damage?



nonbiodegradable wastes?



Long Answer Questions

1. All heterotrophs are consumers. How would

you classify them?

2. Explain the flow and loss of energy in an

ecosystem.



3. What is biological magnification? Explain how the level of accumulation of harmful substances varies with trophic levels.



4. What is the ozone hole? How was it formed?

What is being done to control it?



Objective Questions

1. In an ecosystem, there is a flow of

A. energy only

B. nutrients only

C. water only

D. energy and nutrients

Answer: D

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2. The ultimate source of energy in an ecosystem is the

A. producer

B. consumer

C. sun

D. decomposer

Answer: C



3. The biotic component of an ecosystem consists of

A. plants and animals

B. green plants and algae

C. producers, consumers and decomposers

D. air, water and soil

Answer: C

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4. Out of the following, which is a linear

arrangement of organisms?

A. Trophic level

B. Ecosystem

C. Food chain

D. Food web

Answer: C



5. The third trophic level of a grassland food

chain can have

A. grass

B. grasshoppers

C. hawks

D. frogs

Answer: D



6. In a food chain, herbivores constitute the

A. first trophic level

B. second trophic level

C. third trophic level

D. fourth trophic level

Answer: B

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7. Which of the following constitute a food chain?

A. Plant, apple, butterfly, man

B. Grass, spider, bee, buffalo

C. Plants, insect, toad, snake

D. Algae, insect larvae, fish, cow

Answer: C

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8. What happens in biological magnification?

A. There is progressive increase in the level

of harmful substances through trophic

levels.

B. There is a progressive increase in the
body weight through trophic levels.
C. There is a progressive increase in the
number of organisms through trophic
levels
D. There is progressive increase in
biological activities through trophic
levels

Answer: A

9. The flow of energy in an ecosystem is

A. unidirectional

B. bidirectional

C. multidirectional

D. cyclic

Answer: A

10. Which of the following contain only nonbiodegradable things?

A. Leaves,wood, plastics

B. Polythene, aluminium can, mercury

C. DDT, cow dung, fruit peels

D. Kitchen waste, sewage, pen

Answer: B

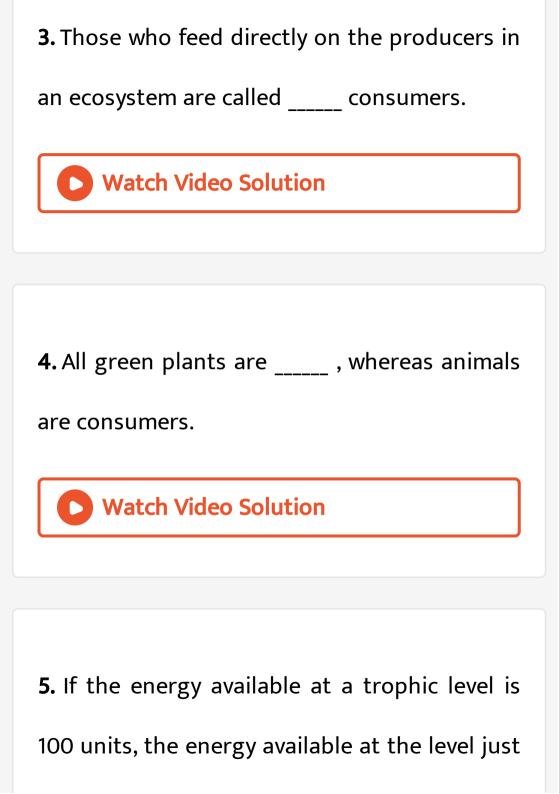
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1. The physical and biological conditions in

which an organism lives is its _____.

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2. In a food chain, each position is known as a



below it will be about units.
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6. The ozone layer protects us from radiation.
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Very Short Answer Questions

1. Give a scientific term for each of the following :

(a) The component which includes physical environment, nutrients and climatic factors (b) The physical and biological world where the organisms live (c) Organisms which eat both plants and flesh of other animals. (d) A position in a food chain (e) Accumulation of chemicals at sucessive

trophic levels of a food chain

(f) Organisms which obtain food from other

living organisms

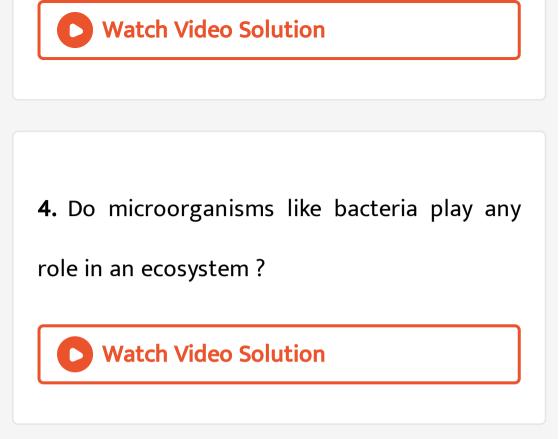


2. Why do herbivoures occupy a position next

to producers in a food chain ?

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3. Give one example each of herbivore, carnivore and omnivore.



5. Why do only autotrophs capture the energy

present in the sunlight?

6. Why is straight line food chain not common

in the natural ecosystem ?



7. Fertilizes and pesticides are used in the soil. How do they reach the food grains and vegetables ?

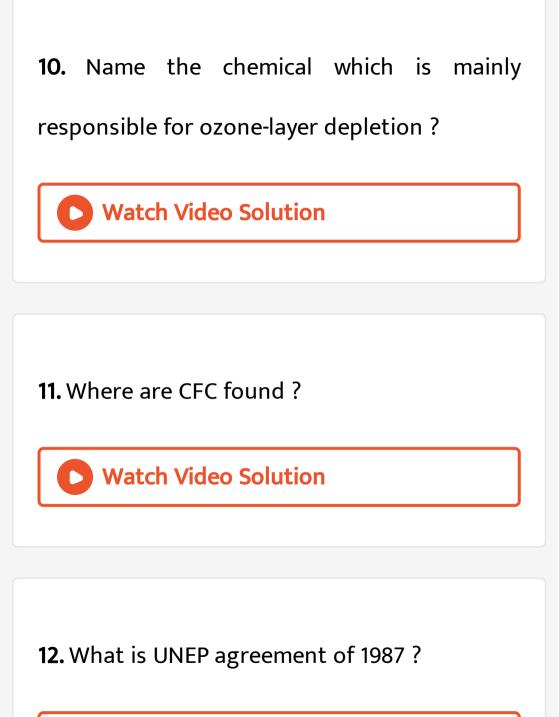
8. What is the position of human beings in any

food chain ?

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9. What is the main function of ozone layer of

the atmosphere ?



Short Answer Question

1. What is a food chain ? Write the common

food chain of a pond ecosystem .



2. We should carry cloth bags every time we go

to the market . Why?

3. What are the abiotic components in an

ecosystem?



4. What are the differences between primary

consumers and secondary consumers ?

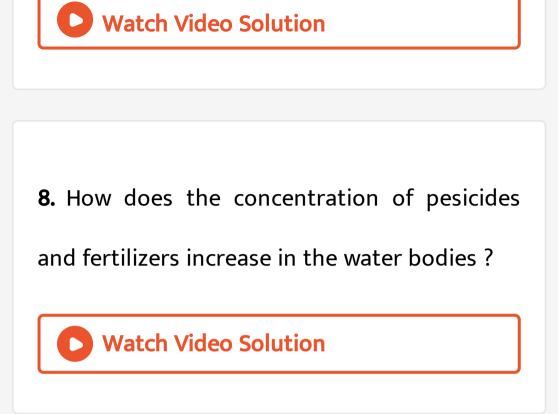
5. Why does a food chain always begin with producers ?
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6. What positions do producers, herbivores

and carnivores occupy in a food chain ?

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7. What is ten per cent law of energy transfer ?



9. Why do we consider crop fields as artificial

ecostems?

10. Why can the pesticides not be removed

from food grains by washing ?



11. What are the effects of ozone-layer

depletion on human beings ?

12. Why is improper disposal of waste a curse

to environment ?

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13. Suggest some measures to replace commonly used nonbiodegradable products with biodegradable ones.

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Long Answer Questions

1. Differentiate between food chain and food

web with one example.



2. Define decomposers. Explain their role in an

ecosystem.

3. Why is the follow of energy unidirectional ? Explain it with the 10% law of transfer of energy.



4. Categorize some of your daily acitvities as ecofriendly. Suggest some more ecofriendly activities which we should adopt in day to day life.



5. Discuss different biotic components and their importance in an ecosystem.

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6. Describe those agricultural practices which

are harmful for environment.

7. Divide the wastes generated from your house into biodegradable and nonbiodegradable categories and suggest methods for their disposal.

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8. How do industrial wastes affect our

environment?

9. Discuss possible methods to manage

garbage and sewage.



Diagrammatic Questions

1. Draw diagrams to represent a common food

chain in a grassland ecosystem.

2. With the help of flow charts show a food

web operating in an ecosystem.

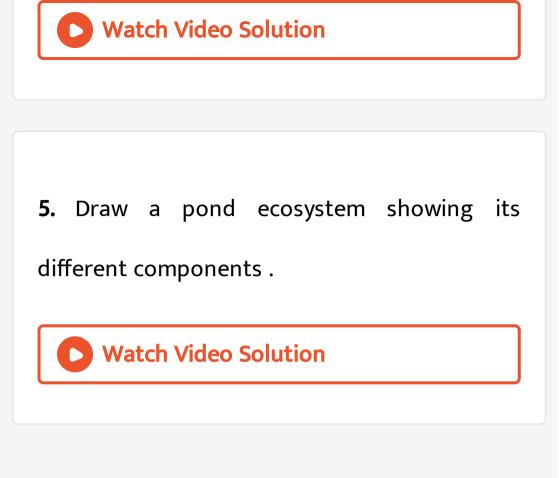


3. Drawn a diagram to represent pyramid of

numbers in any ecosystem.

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4. With the help of diagrams explain how ozone layer gets depleted by CFC.





1. An ecosystem consists of

A. nonliving things only

B. living organisms only

C. both living and nonliving things

D. water , gases and soil

Answer: C

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2. Chlorofluorocarbon (CFC) is mainly

responsible for:

A. global warming

B. acid rain

C. biomagnification

D. ozone - layer depletion

Answer: D

rays?

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3. Which of the following effects on humans will be caused by excessive exposure to UV-

A. Skin cancer

B. Damage to immune system

C. Damage to heart and lungs

D. peptic ulcers

Answer: A::B

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4. Choose the correct statement (s)

A. Green plants convert solar energy into
chemical energy.
B. Substances that are broken down by
biological processes are
nonbiodegradable.
C. DDT and plastic are nonbiodegradable.
D. producers synthesize food from
inorganic compounds

Answer: A::C::D

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5. Which trophic level is occupied by carnivores in a food chain ?

A. First

B. Second

C. Third

D. Fourth

Answer: C

6. If a frog eats a grasshopper, then the energy

will be transferred from

A. consumer to producer

B. primary consumer to secondary

consumer

C. secondary consumer to primary

consumer

D. secondary consumer to tertiary

consumer

Answer: B



7. If 10 kilocalories of energy is available to snakes (fourth trophic level), what be the available energy at producer, level in the following food chain?

 $\mathsf{Grass} \ \rightarrow \ \mathsf{Grasshopper} \ \rightarrow \ \mathsf{Frog} \ \rightarrow \ \mathsf{Snake}$

A. 100 kilocalories

B. 1000 kilocalories

C. 1 kilocalory

D. 10,000 kilocalories

Answer: D

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8. A network of interconnected food chains is

called

A. ecological pyramid

B. food web

C. ecosystem

D. trophic level

Answer: B::C::D



9. Which of the following groups of organisms

do not synthesize carbohydrates from solar

energy and inorganic compounds?

A. Producer

B. Herbivores

C. Consumers

D. decomposers

Answer: D

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10. Which of the following represents an artificial ecosystem ?

A. Forest

B. Grassland

C. Lake

D. Crop field

Answer: D

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11. Why shold we not use plastic cups and plates ?

A. Because they are costly

B. Because they are biodegradable

C. Because the are very light

D. Because they are nonbiodegradable

Answer: C

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12. Which of the following groups of organisms convert organic materials to inorganic forms ?

A. Producers

- **B.** Consumers
- C. Decomposers
- D. Green plants

Answer: C



13. What will be the result if in the following food chain goat popualtion is decreased considerably ? Green plant ightarrow goat ightarrow Lion

A. Green plants will die.

B. The population of lion will increase

C. The population of green plants will

increase and the lion population ill

decrease.

D. Lion will start consuming green plants

Answer: C

14. In which form is the 10% energy available for transfer from one trophic level to the next in an ecospystem?

A. Light energy

B. Mechanical energy

C. Heat energy

D. Chemical energy

Answer: D

15. Why is the number of trophic levels limited in a food chain ?

A. Because there is increase in energy at each level.

B. Because there is succesive decrease in

energy at higher trophic levels.

C. Because trophic levels are connected

D. Because producers constitute first trophic level.

Answer: B



16. What percentage of solar radiation is absorbed by all the green plants for photosynthesis ?

A. 0.001

B. 0.01

C. 0.1

D. 1

Answer: B



- **17.** In the following diagram which trophic level will have the maximum energy ?
- ` (##NKM_FS_BIO_X_C08_E06_017_Q01.png" width="80%">
 - A. T_1
 - $\mathsf{B}.\,T_2$

D. T_4

Answer: A

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18. Omnivores are one type of

A. Producers

B. Consumers

C. decomposers

D. abiotic component





19. Bacteria and fungi do not act as

A. producers

- **B.** Consumers
- C. autotrophs
- D. decomposers

Answer: A::B::C



20. The herbrivores are not

A. Consumers

B. decomposes

C. producers

D. autotrophs

Answer: B::C::D

21. Organisms which feed on dead plants and

animals are called

A. consumers

B. producers

C. decomposers

D. heterotrophs

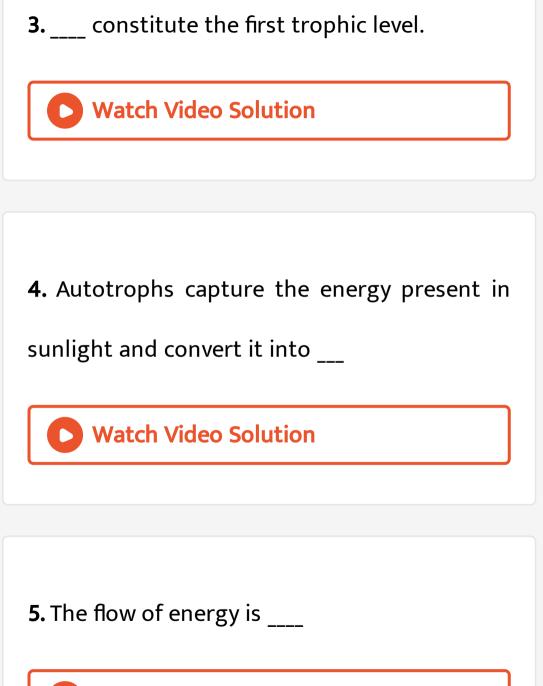
Answer: C

1. Substance that are broken down by biologial

process are called___

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2. Gardens and ____are artificial ecosystems.



6. Human beings occupy the____ position in

any food chain.

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7. The ozone at the higher levels of atmosphere is a product of UV radiations acting on___ molecule.

8. The various components of an ecosystem are



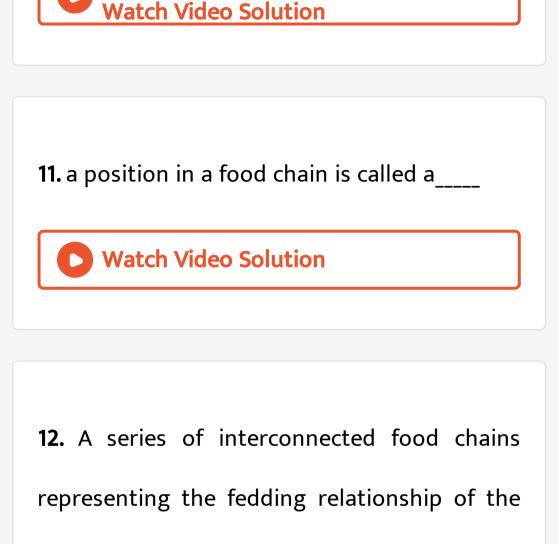
9. There is___of energy when we go from a

trophic level to the next trophic level.

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10. Human activites have an impact on the ____

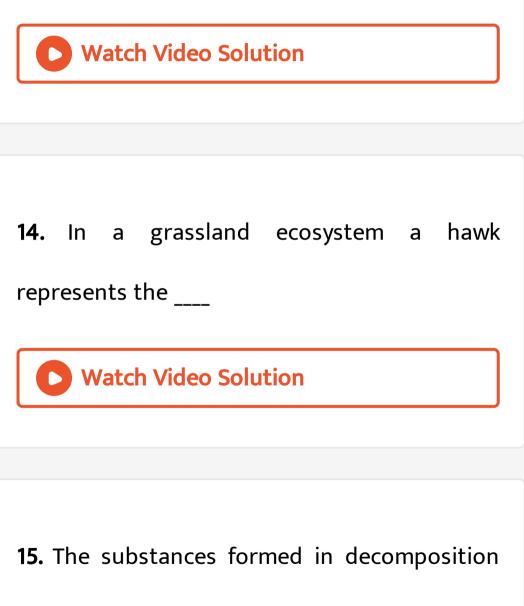




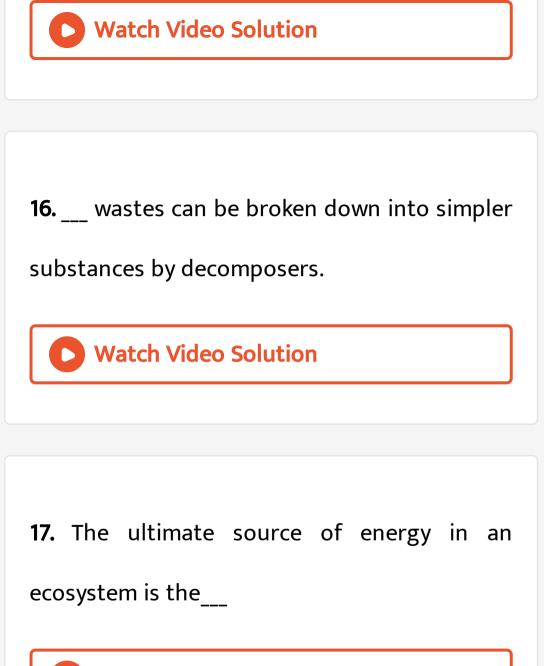
organisms within an ecospystem is called____

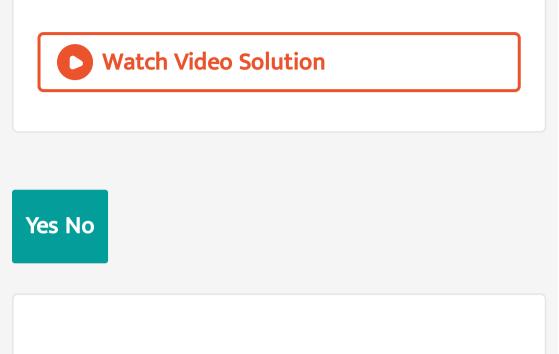
13. The top ____ is not killed and eaten by other

animals of the ecosystem.



are released into the ____ and the ____

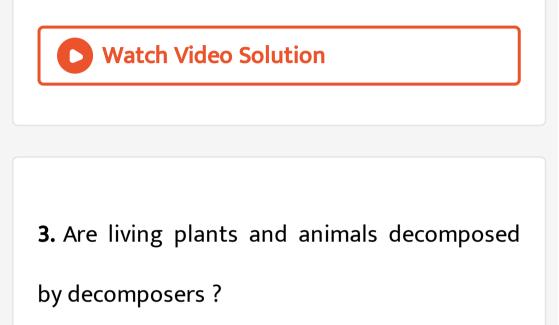




1. Does an ecosystem consist of both biotic

and abiotic components ?

2. Do gardens represent atificial ecosystem ?



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4. Are herbivores, carnivores and omnivores classifications of consumers ?



level in an ecosystem ?

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6. Are herbivores, the secondary consumers ?

7. Can the flow of energy be bidirectional ?



8. The green plants in a terrestrial ecosystem

capture about 1% of the energy of sunglisht .

Is it ture ?



9. Can we say that there is progressive increase in energy level in successive trophic levels ?



10. Does the accumulation of nonbiodegradable pesticides in food chain

result in biological magnification ?

11. Is it true that ozone, the deadly poison it is , shields the surface of the earth from UV radiation ?

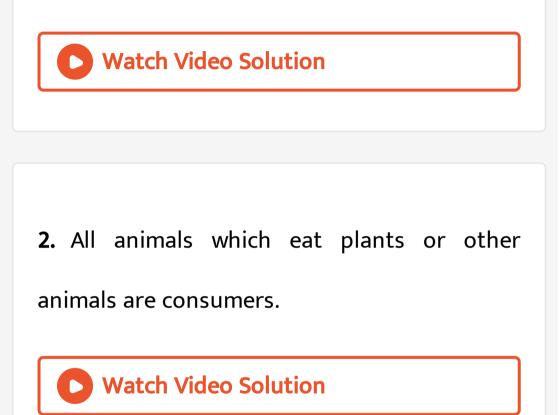
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12. Do carnivoures that feed upon herbivores

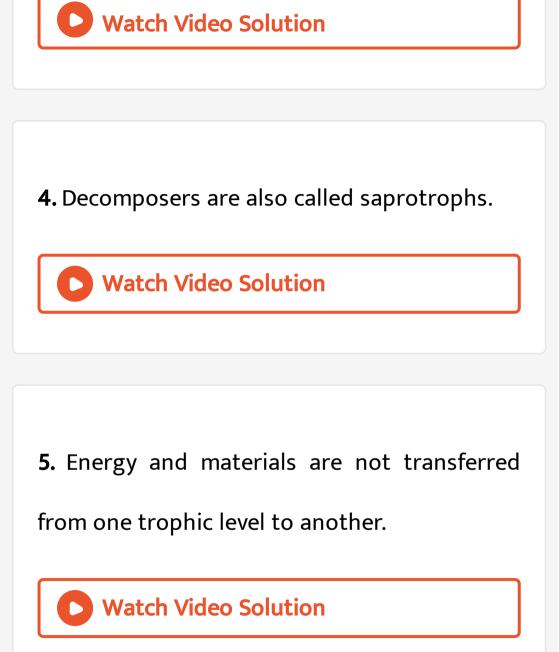
belong to the secound trophic level ?



1. Forests are artificial ecosystems.



3. The frog that eats the grasshopper is a seconddary consumer.



6. DDT is a nonbiodegradable substance.



7. Tertiary consumers form the fourth trophic

level.

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8. Solar energy is converted into chemical energy by heterotrophs.



9. Food chains generally consist of three of

four steps.

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10. CFCs are used as refrigerants and in fire

extinguishers.

11. Aquarium cannot be treated as an

ecosystem.



12. All green and blue-green algae are producers.

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13. Sewage may be used to produce biogas.



