

BIOLOGY

BOOKS - MBD NCERT SOLUTIONS

OUR ENVIRONMENT

Multiple Choice Questions

1. Ecology is the study of:

A. man's environment

- B. pollution of atmosphere, water and soil
- C. the inter-relationships between the living organism environment
- D. effects of environment of living organism.

Answer: C



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2. Aquatic ecosystem consists of

- A. biotic factors
- B. biotic and abiotic factors
- C. consumers only
- D. producers only



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3. Amount of light is used in the production process by plants ?

A. 1 to
$$5\,\%$$

B.
$$5\,\%\,-10\,\%$$

C. 20 to
$$40\,\%$$

D. More than
$$70\,\%$$



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4. The primary consumers in a pond ecosystem is

- A. phytoplankton
- B. zooplankton
- C. fishes
- D. bacteria



- 5. Biotic components include
 - A. producers only

- B. consumers only
- C. producers and consumers only
- D. producers, consumers and decomposers.

Answer: D



- **6.** The word 'ecosystem' was coined by
 - A. Writer
 - B. Tansley

C. Odum

D. Darwin

Answer: B



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7. The importance of green plants on the ecosystem is :

A. they increase the fertility of the soil by decomposing

- B. they are autotrophs
- C. act as tertiary consumers.
- D. act as secondary consumers.



- 8. Green plants are:
 - A. autotrophs
 - B. heterotrops

- C. parasites
- D. saprophytes

Answer: A



- **9.** Which organism is a decomposer?
 - A. Vulture
 - B. Fungus
 - C. Fox

D. Frog

Answer: B



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10. Green plants form the starting of any food chain because :

A. green plants produce organic substances

B. green plants are stationary at one place

C. green plants are found everywhere

D. herbivorous animals are more, than carnivorous animals.

Answer: A



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11. Grass-insect-frog-snake-hawk. In this food chain the secondary consumers are :

A. insects

C. snake
D. grass
Answer: B
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12. Maximum production of energy will be at
which stage:
A incarta
A. insects

B. frog

- B. frog
- C. snake
- D. plant

Answer: D



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13. Which one is a primary consumer in a pond ecosystem?

A. Green algae

B. Zooplankton

C. Snake

D. Bacteria.

Answer: B



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14. Best arrangement of an energy system consists of hawks, snakes, mice and grasses is

A. grass
ightarrow mice
ightarrow snake
ightarrow hawks

 $\texttt{B.} \ grass \rightarrow snake \rightarrow micee \rightarrow hawks$

 $extsf{C.}\ grass
ightarrow mice
ightarrow hawks
ightarrow snakes$

D. mice
ightarrow snake
ightarrow hawks
ightarrow grass

Answer: A



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15. They can be put in the category of primary consumers

A. Eagles and tigers

- B. Fishes and whales
- C. Snakes and frogs
- D. Insects and cattles.

Answer: D



- **16.** Pyramid of number for forest ecosystem is
 - A. upright
 - B. mixed

C. inverted

D. convoluted

Answer: B



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17. A lake ecosystem is

A. artificial

B. abiotic

C. natural

D. hydrological.

Answer: C



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

A. Lindeman

B. Tansley

C. Elton

D. Raunkiaer

Answer: A



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19. What protects the earth from UV radiations

?

- A. A layer of oxygen gas
- B. A layer of ozone gas
- C. A layer of nitrogen oxide

D. layer of SO_2

Answer: B



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20. The meaning of biodegradable pollutants

A. pollutants which are produced from animals

B. pollutants produced from

microorganisms

C. those pollutants which can be degraded

by microogranisms.

D. pollutants produced from plants.

Answer: C



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Very Short Answer Type Questions

1. How is solid waste managed?



2. (a) What is meant by non-biodegradable waste materials? Give two examples of non-biodegradable wastes.

(b) Which of the following materials are biodegradable?

Animal bones, Iron nails, Plastic mugs, Leather belts, Silver foil



3. Which term is used for pollutants that are degraded by natural means?



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4. Is D.D.T. biodegradable.



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5. FCOSYSTEM



6. What are two main components of ecosystem?



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7. What are the abiotic components present?



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8. Give examples of ecosystem.



9. Give one example of smallest and another of large sized ecosystem.



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10. Name two major kinds of ecosystems.



11. Give three examples of fresh water ecosystem.



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12. Name two salt water ecosystem.



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13. Name two man-made ecosystem.



14. Write two examples where man has interfered in ecosystem.



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15. List three main biotic components.



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16. How do decomposers obtain food ?



17. Construct a food chain comprising the following:

Snakes, Hawk, Rats, Plants



18. State any two advantages of studying food chain.



19. What is the source of energy used during photosynthesis ?



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



21. Green plants capture how much of total solar energy.



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22. How much energy is passed from one trophic level to the next trophic level.



23. In the following food chain, 5 J of energy is available to man. How much energy was available at producer level?

Plants cheetah Man



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24. Why plants are called as producers?



25. Name two gases, other than CO_2 , that are given out during burning of fossil fuels and contribute towards acid rain formation.



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26. Define ecosystem.



27. In how many directions the energy flows in any ecosystem.



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28. Name the solar radiation from which the surface of earth is shielded by ozone layer.



29. Which synthetic chemical is responsible for deplection of Ozone layer?



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30. What percentage of solar energy cap-tured by green plants is converted into food energy in a terrestrial ecosystem?



1. Differentiate biodegradable and non-biodegradable pollutants. Classify the following under the above two categories:

DDT, Paper, Cotton, cloth, Plastic



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2. How can the waste be minimized?



3. What is ecosystem ? Write its main components.



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4. Briefly describe the biotic components of an ecosystem.



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5. List the abiotic components of an ecosystem.



6. What is food chain? List the kinds of food chains.



7. Discuss the transfer of energy from sun to carnivores.



8. Give one example each of (1) three step, (2) four step and (3) five step food chain. Ans. Examples:



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9. Which of the food chain will be advantageous in terms of energy?



10. Differentiate between food chain and food web.



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11. What is ozone hole ? What is its significance.



12. Write the harmful effects of ozone depletion.



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13. Explain global Warming.



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14. What is meant by ozone shield? How the CFC's and ozone depleting substances affect

Watch Video Solution 15. How the construction of large dams cause Economic and Environmental problems? **Watch Video Solution 16.** What are the advantages of water stored in the ground?

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Ozone shield?

Long Answer Type Questions

1. Name the two fundamental trophic levels and describe the general make up of each.



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Examples

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



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



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



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



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



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



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



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8. 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:



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9. Which of the following constitute a food chain?

A. grass, wheat and mango

B. grass, goat and human

C. grass, goat and human

D. grass, fish and goat.

Answer:



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

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

B. switching of 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:



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



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



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14. What is biological magnification? What are its effects?



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15. What are the problems caused by the nonbiodegradable wastes that we generate?



16. Explain two ways in which nonbiodegradable substances affect our environment



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



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



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19. Differentiate the following: Ecosystem and biome



20. Differentiate the following:food chain and food web



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21. Differentiate the following :carnivores and omnivores.



22. Why it is said that flow of energy is always unidirectional?



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23. Why does food chain become short?



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24. Can there be more than six trophic levels in a food chain? If not,why?



25. In the context of energy which level of food chain is considered beneficial for us?why?



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26. Write in brief the role of decomposers in recycling.



27. What is meant by soil reosion? What are agents of soil erosion? Write effects of soil erosion.



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28. Define environment ,What are its major components?



29. What is environmental pollution?Write three examples of non-biodegradables which are harmful for human beings.



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30. How does development affect our enivroment?



31. Define pollution.



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32. Differentiate biodegradable and non-biodegradable pollutants. Classify the following under the above two categories: DDT, Paper, Cotton, cloth, Plastic



33. Define biosphere.



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34. What happens when we add waste to the environment?explain



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35. List the biotic and abiotic components of ecosystKHO.



36. Explain functins of ecosystKHO.



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37. List the key functional aspects of ecosystems



38. Differentiate between producers and consumers.



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39. How different levels will be affected if frogs are removed from the following food chain?

Grass → Grasshopper → Frog → Snake → peacock



40. Write food chains of various trophic levels. At which level energy will be maximum?



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41. How does energy reach from environKHOent to the consumer and in which form?



42. What will happen if decomposers are completely remove from the ecosystem?



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43. Write four characteristics of food web.



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44. What is food web?



45. What results do you get from the transformation of energy?



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46. How do harmful insecticides concentrate in our bodies?



47. How are human beings responsible for ecological imbalance?



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48. What is 10% law?



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49. Which man will get more energy-vegetarian of meat eater? give reason



50. Explain with help of a diagram how is life on earth dependent on sun?



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51. How is ecological balance maintained?



52. Name the chKHOicals which are considered responsible for hole in ozone layer?



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53. Name the activites of human beings those have caused much harm to environment



54. Name the problKHOs created by human beings for whole of the world?



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55. Distinguish between decomposers and parasites?



56. A food chain is given below: GrasrarrDeerrarrlion?What will happen if lion is rKHOoved from this food chain?



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57. Explain with the help of a food chain how does bio-magnification of harmful chemical take place



58. if plants get 20,000 J of energy from sun,how much enrgy will be available to lion in the following food chain?calculate.



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59. Why do the food habits of first and third tropic levels differ?



60. How much joules of energy will be receved by vulture in the chain of three living beings-vulture, snakes and paddy, sun provides 10,000 J energy to paddy.



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61. How does ecological pyramid represents the graphical representation of food system of living being in biosphere?



62. How is ozone made in atmosphere?how is it depleting?



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63. In railway trains,tea/coffee is served in earthen pots and disposal cups made of paper?What are the harms of it?



64. What is ozone hole ? What is its significance.



65. Write the harmful effects of ozone deplection.

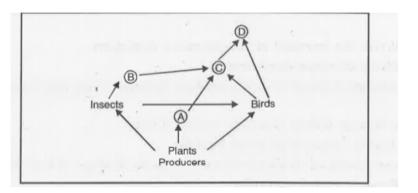


66. Explain global warming.



67. How is acid rain formed? **Watch Video Solution** 68. What is global warming? **Watch Video Solution** 69. List four common disposal methods?

70. Complete the sketch by labelling A,B,C,D to illustrate food web.





71. Match the following:

Column-I		Column-II	
(a)	Phyto planktons	(i)	Fish
(b)	Larvae/Insects	(ii)	Bird
(c)	Carnivore	(iii)	Primary Consumers
(d)	Top Carnivore	(iv)	Producers.



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72. What do different countries discuss their problems based on environmental issues?



73. In which biogeochemical cycles do various interactions take place?



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74. Which substances are called waste substances?



75. What help in digestion of food in our body?



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76. Which substances are specific in their action?



77. Which man made material cannot be decomposed by bacteria and decomposers?



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78. Which physical conditions affect plastic?



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79. What are biodegradable sub-stances?



80. Give four examples of biodegrad-able susbtances



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81. What are non-biodegradabel susbtances?



82. Give two examples of non-biodegradable substances



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83. Give examples of natural ecosystKHO



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84. Give two examples of man made ecosystem.



85. In which three categories are the organisms categoried?



86. What are producers?



87. Give two examples of organisms which can do photo-synthesis.



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88. On what do all organisms directlyor indirectly dependent for their food?



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89. What are consumers?



90. Give four examples of consumers.



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91. Which two organisms decompose waste substances?



92. Why are micro-organisms called decomposers?



93. Where are living organisms found?



94. What is biosphere?



95. List four components which help in making biosphere a non-living component.



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96. Do living and non-living components dependent on each other?



97. List the living components of biosphere.



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98. What is the main activity of decomposers?



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99. Give one example each of autotrophs and heterotrophs



100. Is energy increased or decreased during transformation in food chain?



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101. Grassrarr Deerrarrlion

Who is the producer and why?



102. What are omnivores?



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103. Name two ecosystKHOs of this world?



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104. Grass ightarrow insects ightarrow forg ightarrow birds ightarrowhuman.

In this food chain: who get maximum energy?



105. Grass ightarrow insects ightarrow forg ightarrow birds ightarrow human.

Who gets minimum energy?



106. Give an example of food chain in water.



107. What is formed when various food chains combine?



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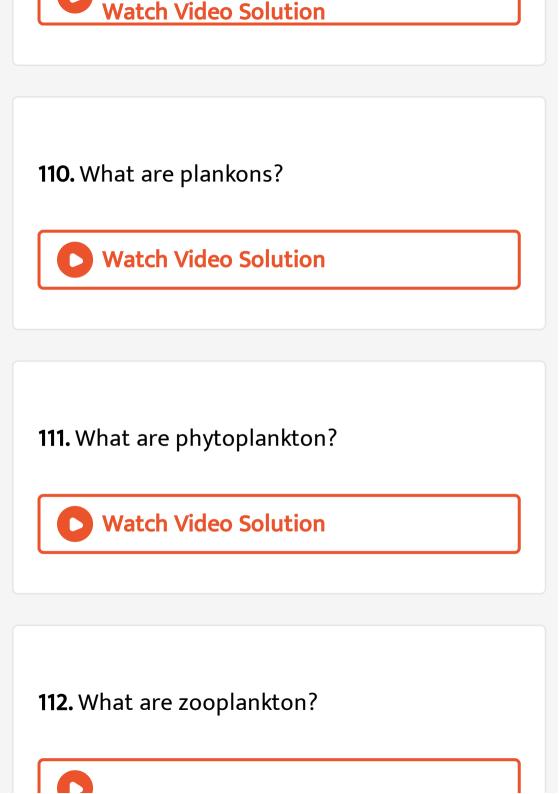
108. Who will get more energy-herbivores of carnivores?



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109. What is the main activity of food chain?







113. Which organisms produce food material?



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114. Give an example of a producer of water food chain.



115. How is energy transferred?



116. How are eagle and vultures important components of our environment?



117. What are trophic levels?



118. Who forms food chain?



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119. What form trophic levels?



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120. Who are related to first trophic level?



121. Who are the organisms of second trophical level?



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122. Give two examples of third trophic level organisms



123. How much amount of solar energy is trapped by green plants?



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124. How much percentage of food can be transferred to next trophic level?



125. How many levels are there in normal food chain?



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126. At which level is the population maximum?



127. In whose body of some living being is the most toxic chKHOical accumulated?



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128. What is the reason of accurmulation of the most harmful substances in human's body/



129. How many atoms of oxygen combine to form ozone?



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130. From what does ozone layer protect earth?



131. What harm can be caused to human beings by U.V.radiations?



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132. What decomposes atoms of oxygen (O_2) to free oxygen (o) at the higher level of air?



133. Since when the level of ozone has started decreasing in atmosphere?



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134. What is the root cause of depletion of ozone layer?



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135. Where are CFC's mainly used?



136. What agreKHOent was accepted by united nations environment programme (UNEP) in 1987?



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137. How improvKHOent in our life style has affect grabage?



138. Which type of garbage has increased with the change in packaging material?



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139. Name any two water pollutants.



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140. The word 'ecosystem' was coined by

A. writer		
B. tansley		
C. odum		
D. darwin		
Answer:		
Watch Video Solution		
141. Green plants are:		
A. autotrophs		

- B. heterotrophs
- C. parasites
- D. saprphytes

Answer:



- **142.** Which organism is a decomposer?
 - A. vulture
 - B. fungus

C. fox

D. frog

Answer:



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143. Grass-insect-frog-snake-hawk. In this food chain the secondary consumers are :

A. insects

B. frog

- C. snake
- D. grass.

Answer:



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144. Which one is a primary consumer in a pond ecosystKHO?

- A. Green algae
- B. zooplankton

C. snake

D. bacteria.

Answer:



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145. Best arrangement of an energy system consists of hawks, snakes, mice and grasses is

A. grass ightarrow mice ightarrow snake ightarrow hawks

B. grass o snake o mice o hawks

C. grass \rightarrow mice \rightarrow hawks \rightarrow snakes

D. mice \rightarrow snake \rightarrow hawks \rightarrow grass.

Answer:



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146. They can be put in the category of promary consumers:

A. eagles and tigers

B. fishes and whales

C. snakes and frogs

D. insects and cattles.

Answer:



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147.and.....are examples of non-biodegradables waster.



148.and....are exapmples of artificial ecosystKHO.



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149. Plants prepare their own food by trapping solar energy and are called........



150.is a unit of environment and can be identified and studied.



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151. Each step in a food chain constitue.......



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152. Thinning in ozone layer allows harmful.....

rays to reach earth surface.



153. Burning of waste in low lying area is called.....

