



BIOLOGY

BOOKS - S CHAND BIOLOGY (HINGLISH)

NATURAL RESOURCES

Exercise

1. Biosphere forms living mantle of Earth.

A. True

B. False

C. Both A and B

D. None of these

Answer: A



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2. Ozonosphere is located in troposphere of atmosphere. True or False.

A. True

B. False

C.

D.

Answer: B



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3. Clouds are formed in stratosphere of atmosphere.



4. Soil is topmost layer of crust of Earth. True or False.

A. True

B. False

C.

D.

Answer: A



5. 75% of Earth's surface is covered with water.

(True/False)

A. True

B. False

C. Both A and B

D. None of these

Answer: A



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6. Combustion consumes oxygen and releases carbon dioxide.

True or False.

A. True

B. False

C. Both A and B

D. None of these

Answer: A



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7. Winds develop due to uneven heating of Earth.

True or False.

A. True

B. False

C. Both A and B

D. None of these

Answer: A



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8. Carbon monoxide and carbon dioxide of air produce acid rain.

A. True

B. False

C. Both A and B

D. None of these

Answer: B



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9. Chlorine -containing substances are not ODS.



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10. The amount of rainfall directly influences the abundance and diversity of life forms.

A. True

B. False

C. Both A and B

D. None of these

Answer: A



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11. Gaia hypothesis was proposed by James Lovelock.



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12. Fertilizers and pesticides are harmful to soil as they kill the microorganisms involved in recycling of nutrients.

A. True

B. False

C.

D.

Answer: A



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13. Methane is a GHG enhancing global warming.

A. True

B. False

C. Both A and B

D. None of these

Answer: A



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14. *Rhizobium leguminosarum* is a nitrogen fixing bacteria which occurs in the soil.



15. Atmosphere of Mars is rich in

.....

A. Carbon dioxide

B. Oxygen

C. Nitrogen

D. Argon

Answer: A



16. Atmosphere of Earth is rich in.....

A. Oxygen

B. Nitrogen

C. Potassium

D. Argon

Answer: B



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17. Surface temperature of moon varies from 190° to



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18. CFCs are carbon compounds having both And chlorine.

A. Fluorine

B. Bromine

C. Iodine

D. All of these

Answer: A



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19.makes soil porous and allows water and air to penetrate deep underground.



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20. Earthworms are.....which are involved in paedogenesis.



21. Single Matching Match the circles the articles of column I and column II

<i>Column I</i>	<i>Column II</i>
(a) Carbon dioxide	(i) Bacteria
(b) Nitrogen fixation	(ii) ODS (ozone depletion substances)
(c) CFCs (chlorofluorocarbons)	(iii) GHG (green house gas)
(d) Decomposers	(iv) Fossil fuels
(e) Oxides of nitrogen and sulphur	(v) Mineralization



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22. Double Matching. Match the contents of columns I,II and III

<i>Column I</i>	<i>Column II</i>	<i>Column II</i>
(a) Mercury	(i) Air and water	I. Living organism
(b) Paedogenesis	(ii) Water pollution	II. Shell (animals)
(c) Abiotic	(iii) Resource	III. Energy
(d) Carbon dioxide	(iv) Photosynthesis	IV. Minamata
(e) Food	(v) Sun, water and wind	V. Soil



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23. Key or Check List Matching: Match the pollutants with the type of pollution -air (A), water (W) and soil (S).

<i>Pollutant</i>	<i>Pollution</i>
(a) Eutrophication causing chemicals	
(b) SPM	
(c) Fly ash	
(d) ODS	



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24. Match Stimulus with Apropriate Response

<i>Conservation practice</i>	<i>Soil A</i>	<i>Water B</i>	<i>Air C</i>
1. Sewage treatment			
2. Terracing			
3. Pollution under control certificate			
4. Vegetation cover			



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25. Define the environment.



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26. Name the physical divisions of biosphere.



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27. What are the major basic requirements of life?



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28. What are natural resources? Give their types.



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29. What is atmosphere? Give its major division.



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30. How are winds produced?



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31. How are clouds formed?



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32. Describe the causes and effects of air pollution.



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33. Water is essential for all physiological activities of the plant and plays a very important role in all living organisms.
(True/False)



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34. (a) What is meant by rainwater harvesting ? Name some of the ancient structures used for rainwater harvesting by the rural people.

(b) What are the various advantages of water stored in ground ?



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35. Describe various causes of water pollution.



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36. Define soil? Give its composition and functions.



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37. How does soil formation takes place in nature? Explain.



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38. Define soil erosion? Describe causes of soil erosion.



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39. Write down some methods of prevention of soil erosion.



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40. Explain water cycle in detail.



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41. Describe nitrogen cycle.



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42. Define biogeochemical cycle. Describe carbon cycle.



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



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44. Explain ozone layer, its depletion and effects of ozone depletion.



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45. Soil is the component of

A. atmosphere

B. hydrosphere

C. lithosphere

D. none of the above

Answer: c



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46. Air is a mixture of

A. nitrogen, oxygen, methane, carbon dioxide

B. nitrogen, oxygen, carbon dioxide, water vapours

C. nitrogen, carbon dioxide, oxygen, carbon monoxide

D. nitrogen, oxygen, carbon monoxide, water vapours.

Answer: B



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47. Which one of inexhaustible resource:

A. fossil fuels

B. minerals

C. soil

D. solar radiation

Answer: D



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48. Cloud formation takes place in which part of atmosphere

A. troposphere

B. stratosphere

C. thermosphere

D. ozonosphere

Answer: A



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49. To which height is ozonosphere present over the equator

A. 11-16 km

B. 23-25 km

C. 16-20 km

D. 10-12 km

Answer: B



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50. Rajasthan and Gujarat fall under

- A. semiarid zone
- B. arid zone
- C. intermediate zone
- D. wet zone

Answer: B



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51. SPN includes

A. flyash

B. dust

C. soot and smoke

D. all the above

Answer: D



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52. Which of the following is a secondary pollutant

A. PAN

B. particulate matter

C. hydrocarbons

D. chorofluorocarbons

Answer: A



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53. Photochemical smog is formed by

A. NO_2

B. SO_2

C. CO_2

D. CO

Answer: A



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54. Causes of water pollution are

A. inorganic

B. organic

C. biological

D. all of these

Answer: D



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55. Run off from fertilizer -rich crop fields causes

A. turbidity of water bodies

B. precipitation of toxicants

C. eutrophication of water bodies

D. thermal pollution of water bodies.

Answer: c



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56. Cadmium pollution of water body produces a disease of humans called

A. plumbasim

B. black foot disease

C. mthaemoglobinaemia

D. itai-itai

Answer: D



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57. percolation tanks and wells are used for

A. irrigation

B. harvesting of flood water

C. supply of drinking water

D. all the above

Answer: D



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58. Which of the following soil is transported by air?

A. alluvial

B. aeolian

C. elluvial

D. glacial

Answer: B



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59. Soil that is best suited for plant growth is

A. clayey

B. loam

C. sandy

D. gravel

Answer: B



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60. Sun causes weathering of rocks through

- A. mechanical force
- B. physical phenomena
- C. chemical changes
- D. biological changes

Answer: B



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61. Biological weathering is caused by

A. lichens

B. mosses

C. roots of plants

D. all the above

Answer: D



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62. Wind breaks are

A. raising edges of fields

B. growing grasses alternating with crops

C. mud walls

D. row of trees and shrubs

Answer: D



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63. Signs of eutrophication of water bodies include

A. reduced oxygen demand

B. rapid decomposition of organic matter

C. algal bloom

D. fluorosis

Answer: c



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64. Minamata human disease is caused by pollution of water by

A. cadmium

B. lead

C. mercury

D. arsenic

Answer: c



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65. Green plants in an ecosystem are called

A. producers

B. consumers

C. decomposers

D. none of the above

Answer: A



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66. Ecosystem comprises both abiotic and biotic components. Biotic component of an ecosystem consists of

- A. producers
- B. consumers
- C. decomposers
- D. all of the above

Answer: D



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67. Name the gas which plays a major role in global warming

A. carbon monoxide

B. nitrous oxide

C. carbon dioxide

D. sulphur dioxide

Answer: C



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68. Green house effect is caused by

A. green plants

B. infrared rays

C. UV-rays

D. X-rays

Answer: B



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69. Ozone hole over Antarctica appears during

A. spring

B. summer

C. autumn

D. winter

Answer: A



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70. Give an account of various sources and harmful effects of water pollution.



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71. Explain ozone layer, its depletion and effects of ozone depletion.

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72. List any three human activities which would lead to an increase in the carbon dioxide content of air.

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73. Define soil erosion. Give its causes, effects and preventive measures.



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74. Mention any three human activities which are responsible for depletion of the ozone layer.



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75. Name any two greenhouse gases.



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76. What do you mean by ammonification?



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77. Name the region of the atmosphere where most of the atmospheric gases are present.



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78. What effects does the increasing organic waste have on the dissolved oxygen content and biochemical oxygen demand of water?



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79. What is the phenomenon through which certain pollutants get accumulated in tissues in increasing concentration along the food chain, called?





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80. Give three important reasons why soil is essential for living organisms.



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81. What is chief source of precipitations?



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82. What do you mean by rainwater harvesting?



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83. Name two diseases caused by

- (a) Infectious agents in polluted water,
- (b) Toxic chemicals in polluted water.



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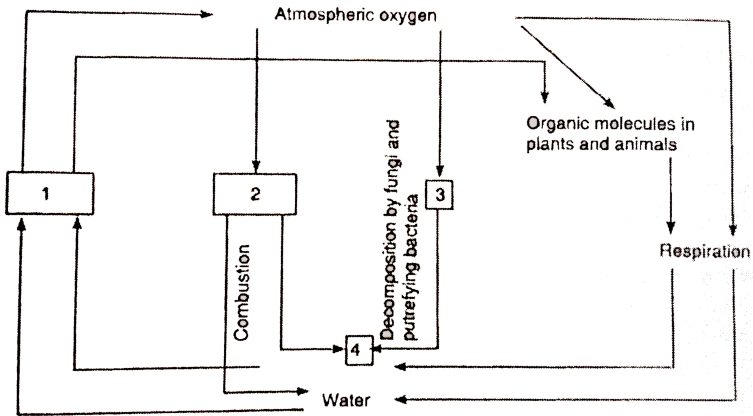
84. Name three occupational diseases caused due to air pollution. Also mention their causative factors.



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85. (a) Identify the biogeochemical cycle given below:

(b) Fill in the blanks marked 1-4.

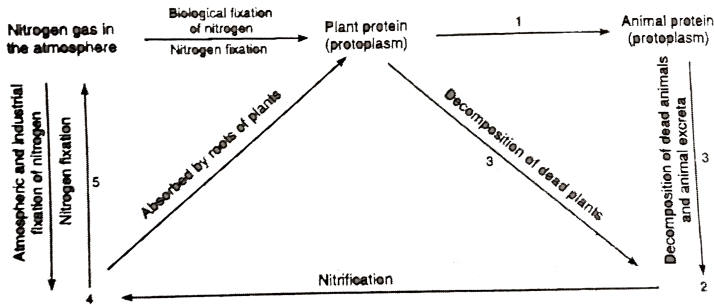


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86. (a) Fill in the blanks marked 1-5 in figure of nitrogen cycle.

(b) What will happen if the step of ammonification does not take place?

(c) What will happen if the step of denitrification does not take place?



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87. What will happen if nitrogen fixation does not take place?



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88. Why is life not possible on Venus and Mars?



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89. Why are lead compounds are added to petrol? How is it harmful?



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90. Name the fertilizers whose excessive presence in water bodies results in algal growth. What is the consequence of eutrophication.



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91. Which air pollutants cause hole in ozonosphere?



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92. Pollution of water is caused by

A. industrial effulents

B. sewage

C. farm runoff

D. all of these

Answer:



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93. Water pollution due to cadmium results in
.....in humans.



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94. Uneven heating of Earth produces winds.



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95. Match the following Column - I and Column
- II

Column-I

1. GHG
2. CFCs
3. PAN
4. Lichen

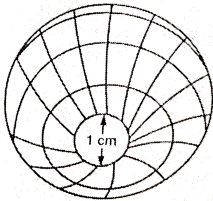
Column-II

- (a) Paedogenesis
- (b) Methane
- (c) Global warming
- (d) Smog

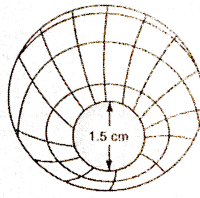


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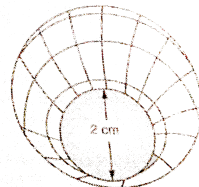
96. What does the following figure depict?



October
1980



October
1985



October
1990



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97. Describe eutrophication.



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98. Write a short essay on soil erosion.



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99. Describe nitrogen cycle.



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100. Major component of the atmosphere on Venus and Mars planet is

A. carbon dioxide

B. oxygen

C. nitrogen, carbon dioxide, oxygen, carbon monoxide

D. water vapours

Answer: A



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101. All the elements of life support system are

- A. inter-related
- B. inter-dependent
- C. interconnected
- D. all the above

Answer: D



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102. In a natural ecosystem, decomposers include

A. bacteria and fungi

B. parasitic algae

C. macroscopic animals

D. all the above

Answer: A



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103. Pollution is not caused by

A. thermal power plants

B. automobiles

C. radioactive power plants

D. hydroelectric power plants

Answer: D



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104. Biosphere occurs

A. in lithosphere

B. in lithosphere and hydrosphere

C. at place of interaction of

lithosphere, hydrosphere and

atmosphere

D. in atmosphere and hydrosphere

Answer: C



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105. Air is a mixture of

- A. exhaustible resource
- B. inexhaustible resource
- C. perishable resource
- D. both b and c

Answer: B



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106. Day time temperature of moon is

A. $60^{\circ} C$

B. $70^{\circ} C$

C. $90^{\circ} C$

D. $110^{\circ} C$

Answer: D



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107. Percentage of total water found as fresh water is

A. 46 %

B. 32 %

C. 16 %

D. 2.5 %

Answer: D



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108. Toxic chemical released by paper industry
is

A. cadmium

B. mercury

C. lead

D. nickel

Answer: B



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109. Fertilizers cause

- A. eutrophication of water bodies
- B. killing of most microorganisms
- C. destruction of crumb structure of soil
- D. all the above

Answer: D



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110. Wind causes weathering of rocks through

A. chemical change

B. abrasion

C. mechanical force

D. frost action.

Answer: B



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111. Forest destruction results in

A. loss of wild life

B. flods in an ecosystem is

C. sunlight

D. glucose

Answer: D



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112. The ultimate source of energy in an ecosystem is

A. sunlight

B. glucose

C. protein

D. green plants

Answer: A



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113. Which are sensitive to SO_2 pollution?

A. mosses

B. lichens

C. algae

D. ferns

Answer: B



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114. Eutrophication results in reduction of:

A. dissolved hydrogen

B. dissolved oxygen

C. mineral salts

D. dissolved nitrate

Answer: B



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115. In nitrogen cycle, which bacteria are responsible for nitrification

A. Clostridium

B. Rhizobium

C. Nitrosomonas

D. Nitrosomonas and Nitrobacter

Answer: D



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116. Nif genes occur in

A. Rhizobium

B. Streptococcus

C. Penicillium

D. Aspergillus

Answer: A



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117. Pollution of water is caused by

A. industrial effluents

B. sewage

C. farm runoff

D. all of these

Answer: D



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118. Greenhouse effect is caused by

A. green plants

B. infrated rays

C. UV-rays

D. X-rays

Answer: B



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119. Air is

A. good conductor of heat

B. bad conductor of heat

C. neither good or bad conductor of heat

D. sometimes good and sometimes bad

conductor of heat

Answer: B



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120. Green house is related to

A. global warming

B. terrace gardening

C. kitchen garden

D. increase growth of algae

Answer: A



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121. Major source of air pollution is

A. burning of fossil fuels

B. burning of wood

C. burning of biogas

D. burning of dung cakes

Answer: A



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122. Organisms such as lichens are very sensitive to the levels of in the atmosphere

A. carbon dioxide

B. sulphur dioxide

C. carbon monoxide

D. methane

Answer: B



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123. Major source of formation of soil is

A. rocks

B. snow covered mountains

C. rivers beds

D. volcanoes

Answer: A



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124. Solar radiation heat up

- A. land faster than the water bodies
- B. land slower than the water bodies
- C. equally both land and water bodies
- D. neither land or nor water bodies

Answer: A



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125. Soil erosion is caused due to

- A. strong wind
- B. heavy rains
- C. keeping the fields fallow for a long
- D. all of these

Answer: D



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126. Soil erosion is can be prevented by

- A. terrace farming
- B. intensive cropping
- C. deforestation
- D. both a and b

Answer: D



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127. Name the gas which plays major role in globe warming

A. carbon monoxide

B. nitrous oxide

C. carbon dioxide

D. sulphur dioxide

Answer: C



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128. The conversion of NO_3 and N_2 is called

- A. nitrification
- B. denitrification
- C. ammonification
- D. nitrogen fixation

Answer: B



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129. Nitromonas bacteria convert

- A. nitrite to nitrate
- B. ammonia into nitrate
- C. ammonia into nitrite
- D. nitrite into ammonia

Answer: C



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130. The ozone layer of the atmosphere blocks

- A. infrared radiations

B. sunlight

C. UV radiations

D. both UV and infrard radiation

Answer: C



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131. Which of the following contribute to green house effect?

A. methane (CH_4)

B. carbon dioxide (CO_2)

C. chlorofluorocarbons ($CFCs$)

D. all of these

Answer: D



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132. Who is popularly known as water man?

A. Gajendra Singh

B. Rajendra Singh

C. Louis Pasteur

D. Tansley

Answer: B



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133. Chlorofluorocarbons have been is use for

A. aerosol propellants

B. formation of foam

C. refrigerators

D. all the above

Answer: D



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134. Ozone hole was discovered in

A. 1992

B. 1985

C. 1995

D. 1998

Answer: B



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135. What are the two forms of oxygen found in the atmosphere?

- A. water and ozone
- B. water and oxygen
- C. ozone and oxygen
- D. water and carbon dioxide

Answer: C



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136. The atmosphere of the Earth is heated by radiations which are mainly

A. radiated by sun

B. re-radiated by land

C. re-radiated by water

D. re-radiated by land and water

Answer: D



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137. What would happen, if all land and water present in the environment is converted to ozone?

A. we will be protected more

B. it will become poisonous and kill living forms

C. ozone is not stable, hence it will be toxic

D. it will help harmful sun radiations to reach earth and damage many life forms

Answer: B



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138. If there were no atmosphere around the earth, the temperature of the earth will

A. increase

B. go on decreasing

C. increase during day and decrease during
night

D. be unaffected

Answer: C



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139. Which of the following gases is not green house gas?

A. methane

B. carbon dioxide (CO_2)

C. carbon monoxide

D. ammonia

Answer: D



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140. Which of the following is a recently originated problem of environment?

A. ozone layer depletion

B. green house effect

C. global warming

D. all of the above

Answer: D



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141. Ozone layer is getting depleted because of

A. excessive use of automobiles

B. excessive formation of industrial units

C. excessive use of man made compounds

containing both fluorine and chlorine

D. excessive deforestation

Answer: C



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142. What is ozone hole?

A. a large sized hole in the ozone layer

B. thinning of the ozone layer

C. small holes scattered in the ozone layer

D. thickening of ozone in the ozone layer

Answer: B



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143. When we breathe in air, nitrogen also goes inside along with oxygen. What is the fate of this nitrogen?

A. it moves along with oxygen into the cell

B. it comes out with the CO_2 during exhalation

C. it is absorbed only by the nasal cells

D. nitrogen concentration is already more in the cells so it is not all absorbed

Answer: A



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144. One of the following factors does not lead to soil formation in nature

A. sun

B. water

C. wind

D. polythene bags

Answer: D



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145. Major source of mineral in soil is the

A. parent rock from which soil is formed

B. plants

C. animals

D. bacteria

Answer: A



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146. The process of nitrogen fixation by bacteria does not take place in the presence of

A. molecular form of hydrogen

B. elemental form of oxygen

C. water

D. elemental form of nitrogen

Answer: B



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147. Biotic component of biosphere is not constituted by

A. producers

B. consumers

C. decomposers

D. air

Answer: D



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148. Total earth's surface covered by water is

A. 0.75

B. 0.6

C. 0.85

D. 0.5

Answer: A



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149. Choose the correct sequences

A. CO_2 in atmosphere \rightarrow decomposers

\rightarrow organic carbon in animals \rightarrow

organic carbon in plants

B. CO_2 in atmosphere \rightarrow organic carbon

in plants \rightarrow organic carbon in animals

\rightarrow inorganic carbon in soil

C. inorganic carbonates in water \rightarrow

organic carbon in plants \rightarrow organic

carbon in animals → scavengers

D. organic carbon in animals →

decomposers → CO_2 in atmosphere

→ organic carbon in plants

Answer: B



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150. Rainfall patterns depend on

A. the underground water table

B. the number of water bodies in an area

C. the density pattern of human population in an area

D. the prevailing season in an area

Answer: B



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151. One of the following processes is not a step involved in the water cycle operating in nature

- A. evaporation
- B. transpiration
- C. precipitation
- D. photosynthesis

Answer: D



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152. Among the given options, which one is not correct for the use of large amount of fertilizers and pesticides ?

A. they are eco-friendly

B. they turn the fields barren after some time

C. they adversely affect the useful component from the soil

D. they destroy the soil fertility

Answer: A



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153. The nitrogen molecules present in air can be converted into nitrates and nitrites by

- A. a biological process of nitrogen fixing bacteria present in the soil
- B. a biological process of carbon fixing factor present in soil
- C. any of the industries manufacturing nitrogenous compounds
- D. the plants used as cereal crops in field

Answer: A



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154. The term water pollution can be defined in several ways. Which of the following statements does not give the correct definition?

A. the addition of undesirable substances to water bodies

B. the removal of desirable substances
from water bodies

C. a change in pressure of the water bodies

D. a change in temperature of the water
bodies

Answer: C



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155. Which step is not involved in the carbon cycle?

A. photosynthesis

B. transpiration

C. respiration

D. burning of fossil fuels

Answer: B



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156. Top soil contains the following

A. humus and living organisms only

B. humus and soil particles only

C. humus, living organisms and plants

D. humus, living organisms and soil particles

Answer: B



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157. Low visibility during cold weather is due to

A. formation of fossil fuel

B. unburnt carbon particles or hydrocarbons suspended in air

C. lack of adequate power supply

D. none of these

Answer: C



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158. Oxygen is returned to the atmosphere mainly by

A. burning of fossil fuel

B. respiration

C. photosynthesis

D. fungi

Answer: C



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159. An increase in carbondioxide content in the atmosphere would not cause

A. more heat to be retained by the environment

B. increase in photosynthesis in plants

C. global warming

D. abundance of desert plants

Answer: B



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160. Oxygen is harmful for

A. ferns

B. nitrogen fixing bacteria

C. chara

D. mango tree

Answer: B



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161. Soil erosion can be prevented by

A. raising forests

B. deforestation

C. excessive use of fertilizer

D. overgrazing by animals

Answer: A



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162. Growth of lichens on barren rocks is followed by the growth of

A. moss

B. ferns

C. gymnosperms

D. algae

Answer: A



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163. Marked temperature changes in aquatic environment can affect

- A. breeding of animals
- B. more growth of aquatic plants
- C. process of digestion in animals
- D. availability of nutrients.

Answer: A



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164. Name the man made component which is responsible for the depletion of ozone layer



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165. Mention one method by which living organisms influence the formation of soil.



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166. In nitrogen cycle, which bacteria are responsible for nitrification



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167. We are lucky that ozone is not stable near to the Earth's surface. Why? Give appropriate answer.



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168. How the biosphere is a dynamic and stable system?



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169. Name any two factors responsible for the formation of the soil.



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170. Write full form of CFC.



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171. Name two nitrogen compounds obtained by industrial fixation.



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172. State one use of ozone



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173. State the role of symbiotic bacteria in nitrogen cycle in nature.



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174. What is the function of ozone which is present in the upper level of the atmosphere?



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175. Name any one method by which water helps in the formaton of soil.



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176. List two ways in which water is useful to living organisms.



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177. (a) Mention any two human activities which would be responsible for air pollution.

(b) How is Earth's atmosphere different from that of Venus and Mars?



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178. Define soil erosion? Describe causes of soil erosion.



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179. What is green house effect? How is it called?



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180. Give reasons for the following:

(i) We are lucky that ozone is not stable near Earth's surface.

(ii) The combustion of fossil fuels increases the amount of suspended particles in air.



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181. Atmospheric nitrogen-fixation is carried on
by



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182. State two harmful affect each of
(a) Air pollution and (b) Water pollution.



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183. (a) What is soil erosion? State any one way by which it can be prevented.

(b) What is humus? What is the role of earthworms in increasing the quantity humus.



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184. List two ways by which carbon dioxide is fixed in the environment.

(b) Name two diseases caused due to an

increased content of pollutants in the air produced due to the burning of fossil fuels.



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185. Why do the terrestrial life forms required fresh water?

(b) Give two examples where fresh water can be found in the frozen form on the Earth.



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186. With the help of a labelled diagram show

(a) Nitrogen cycle in nature

(b) Describe briefly any two processes involved in the cycling of N_2 in the environment.

OR

With the help of a labelled diagram show the cycling of carbon in nature. What are the two ways in which carbon dioxide is fixed in the environment.



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187. (a) What are forms of oxygen found in the atmosphere?

(b) forests influence the quality of our air soil and water resources. Justify the statement.



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188. (a) Draw well labelled diagram of oxygen cycle in nature.

(b) Explain in how many ways O_2 is used up from the atmosphere and how it returns back to atmosphere.



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189. (a) With the help of well labeled diagram explain water cycle in nature.

(b) How is green house effect related to Global warming? Explain.



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190. (a) Draw a well labelled nitrogen cycle in nature.

(b) Describe one biological and one physical

method of conversion of nitrogen to forms like nitrates and nitrites.

OR

(a) Draw a labelled carbon cycle in nature.

(b) Describe briefly two processes by which carbon dioxide is returned back to the atmosphere.



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191. We know that many human activities lead to increasing levels of pollution of the air,

water-bodies and soil. Do you think that isolating these activities to specific and limited areas would help in reducing pollution?



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192. (i) With the help of a neat labelled diagram depict the cycling of carbon in nature.

(ii) Mention two ways in which carbon dioxide is fixed in the environment.

OR

(i) Describe green house effect. How the

presence of green house gases would lead to global warming.

(ii) Draw a neat labelled diagram of water cycle in nature.



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193. (i) Make a neat and labelled sketch of nitrogen cycle in nature.

(ii) Describe in brief the role of nitrogen fixing bacteria and of lightening in fixing atmospheric nitrogen.

OR

(i) Draw a neat labelled sketch of carbon cycle in nature.

(ii) What is green house effect? How does carbon dioxide cause global warming in the atmosphere.



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194. (a) In coastal areas wind current moves from sea towards the land during day, but during night it moves from land to sea.

Discuss the reason.

(ii) How are CFCs harmful for the environment and living beings?



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195. How can we prevent loss of top soil?



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196. Rivers from land and minerals to sea water. Discuss how.



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197. How is life of organisms living in water affected when water gets polluted?



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198. During summer,if you go near the lake you feel relief from heat. Why?



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199. In coastal areas, wind current moves from sea towards the land during day but during night it moves from land to the sea. Discuss the reason.



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200. Following are a few organisms (a) Lichens, (b) Mosses, (c) Mango tree, (d) Cactus, which among the above can grow on stones help in formation of soil? Write the mode of their action for making the soil.



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201. Soil formation is done by both abiotic and biotic factors. List the name of these factors by classifying them as abiotic and biotic.



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202. All the living organisms are basically made up of C,N,S,P,H and O. How they enter the living forms?



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203. Why does the percentage of gases such as oxygen, nitrogen and carbon dioxide remain almost the same in the atmosphere?



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204. Why does moon have very cold and very high temperature variations e.g. from -190° to $110^{\circ}C$ even though it is at the same distance from the sun as the Earth is?



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205. Why do people love to fly kites near the sea shore?



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206. Why does Mathura refinery pose problems to the Taj Mahal?



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207. Why do not lichens occur in Delhi where as they commonly grow in Manali or Darjeeling?



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208. Why does water need conservation even though large oceans surround the land masses?



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209. There is a mass mortality of fish in a pond.

What may be the reason?



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210. Lichens are called pioneer colonisers of bare rock. How can they help in formation of soil?



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211. Soil is formed by water. If you agree with this statement, then give reasons.



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212. Fertile soil has lots of humus. Why?



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213. Why step farming is common in hills?



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214. Why are root nodules useful for the plants?



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215. How do fossil fuels cause air pollution?



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216. What are the causes of water pollution?

Discuss how you can contribute in reducing water pollution.



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217. A motor car, with its glass totally closed, is parked directly under the sun. The inside temperature of the car rises very high. Explain why?



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218. Justify 'Dust is a Pollutant'.



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219. Explain the role of the sun in the formation of soil.



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220. Carbon dioxide is necessary for plants.

Why do we consider it as a pollutant?



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221. How is our atmosphere different from the atmospheres on Venus and Mars ?



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222. How does the atmosphere act as a blanket?



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223. What causes winds?



Watch Video Solution

224. How are clouds formed?



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225. List any three human activities that you think lead to air pollution.



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226. Why do organisms need water ?



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227. What is the major source of fresh water in the city/town village where you live?



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228. Do you know of any activity which may be polluting this (underground) water source ?



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229. How is soil formed?



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230. What is soil erosion?



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231. What are the methods or preventing or reducing soil erosion ?



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232. What are the different states in which water is found during the water cycle?



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233. Name two biological important compounds that contain both oxygen and nitrogen.



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234. List any three human activities which would lead to an increase in the carbon dioxide content of air.



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235. What is the greenhouse effect?



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236. What are the two forms of oxygen found in the atmosphere?



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237. Why is the atmosphere essential for life?



Watch Video Solution

238. Why is water essential for life?



Watch Video Solution

239. How are living organisms dependent on the soil ? Are organisms that live in water totally independent of soil as a resource?



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240. We know that many human activities lead to increasing levels of pollution of the air, water-bodies and soil. Do you think that

isolating these activities to specific and limited areas would help in reducing pollution?



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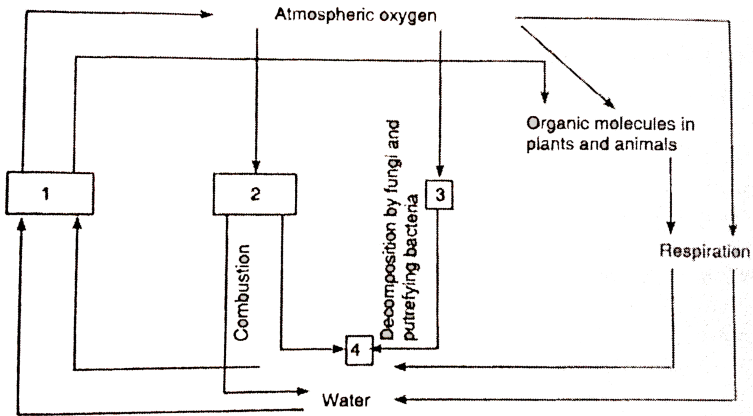
241. Write a note on how forests influence the quality of our air, soil and water resources.



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242. (a) Identify the biogeochemical cycle given below:

(b) Fill in the blanks marked 1-4.



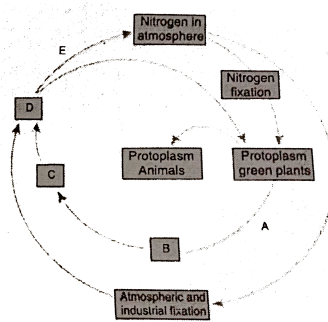
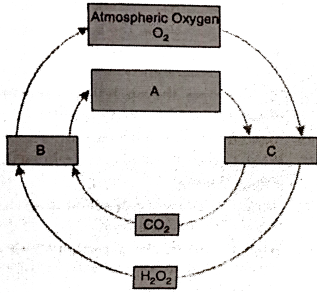
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243. (a) Identify the biogeochemical

(b) Fill in the blanks, A,B,C and D.

(c) What will happen if the step E does not

OCCUR.



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244. (a) List two main sources of emission of carbon dioxide.

(b) How carbon monoxide is harmful?



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245. (a) Name two acids that are usually present in rain water.

(b) How these acids affect our hearitage monuments such as Taj Mahal ?



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246. List the chemicals whose biomagnification result in following diseases in humans, (i) Minamata disease, (ii) Itai disease.



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247. (a) List two bacteria which bring about nitrification.

(b) List one denitrifying bacteria.

(c) List any two bacteria which play a role in biological nitrogen fixation.



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248. What is biosphere?



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249. Name the physical divisions of biosphere.



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250. What are natural resources? Give their types.



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251. What is the literal meaning of resource?



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252. Name one (1) inexhaustible resource, (2) Renewable exhaustible resource (3) Non-renewable exhaustible resource



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253. Name any inexhaustible natural resource.



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254. Define atmosphere.



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255. Name two planets other than Earth which also have an atmosphere.



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256. Name the region of atmosphere where (a) ozone layers is present, (b) Most of the

atmospheric gases are present.



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257. What percentage of carbon dioxide is present in the atmosphere ?



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258. What is air?



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259. Why is life not possible on Venus and Mars?



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260. Name the two important biological processes in which air is essential.



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261. Name the gas which has the highest percentage in air.



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262. Why is air called breath of life? Enumerate functions of air or atmosphere.



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263. Which forms the nuclei for condensation of water vapours in the atmosphere?

A. Dust

B. Smoke

C. Both A and B

D. None of these

Answer: C



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264. What is the direction of air in coastal areas during the night?



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265. What is rain gauge?



Watch Video Solution

266. Define air pollution.



Watch Video Solution

267. What is smog ?



Watch Video Solution

268. What is acid rain?



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269. Lichens are sensitive to which component of air pollution.



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270. Name the common air pollutant which causes depletion of ozone layer.



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271. Name the major green house gas responsible for causing global warming.



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272. How is ozone layer useful to us ?



Watch Video Solution

273. Name any one source of emission of carbon monoxide?



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274. Which of the following two gases has more affinity for hemoglobin?

(i) Oxygen (ii) Carbon monoxide



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275. Name the component present in marble which reacts with acids present in acid rain.



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276. Where is the major part of fresh water bound up?



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277. Which one determines the density and richness of biota?



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278. Name parts of India with maximum diversity.



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279. Name an area in India with very poor vegetation.



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280. What is water harvesting?



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281. Define water pollution.



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282. Name to common pathogens in polluted water.



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283. Name any three water pollutants.



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284. What is sewage?



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285. Name the disease caused by mercury pollution of water.



[Watch Video Solution](#)

286. What is thermal pollution?



[Watch Video Solution](#)

287. Define soil.



Watch Video Solution

288. Name three physical agents which cause weathering of rocks.



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289. Name the two processes which contribute to soil formation.



[Watch Video Solution](#)

290. What is soil pollution?



[Watch Video Solution](#)

291. Give two effects of soil erosion.



[Watch Video Solution](#)

292. What is paedogenesis?



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293. What is weathering?



Watch Video Solution

294. Name the types of weathering.



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295. What is humification?



[Watch Video Solution](#)

296. What is top soil?



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297. What is function of wind breaks?



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298. What is terracing?



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299. Name the type of water (present in the soil) which can be absorbed by plants.



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300. What is detritus?



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301. What are detritivores? Name any one of them.



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302. What is methane burp?



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303. What are biogeochemical cycles?



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304. Define the biogeochemicals?



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305. How do marine organisms receive continuous supply of nutrients?



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306. What is water cycle? Give its other name.



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307. What is nitrogen fixation?



[Watch Video Solution](#)

308. Name the bacterium capable of nitrogen fixation which resides in the root nodules of legumes.



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309. What is ammonification?



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310. Name a bacterium that causes ammonification.



Watch Video Solution

311. Define nitrification.



Watch Video Solution

312. In nitrogen cycle, which bacteria are responsible for nitrification



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313. What is denitrification?



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314. Name the process which causes a long term withdrawal of carbon from carbon cycle?



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315. What is the reason of increasing concentration of carbon dioxide in the atmosphere?



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316. What is green house?



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317. Whatt is greenhouse effect?



Watch Video Solution

318. What are green house gases?



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319. What do you mean by global warming?



Watch Video Solution

320. How is oxygen replenished in nature?



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321. What is ozone layer (= umbrella)?



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322. What is ODS?



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323. What is Ozone hole?



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324. What are inexhaustible resources?



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325. Define renewable resources?



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326. Give two examples of non-renewable resources.



Watch Video Solution

327. Give two ways in which carbon dioxide is fixed.



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328. Name the articles which act as nucleus for water droplets to form around in the atmosphere.



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329. Explain the phenomena of : (a) Acid rain,
(b) Global warming



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330. Name respiratory diseases that may occur due to air pollution.



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331. Name the two acids that are present in acid rain.



Watch Video Solution

332. What is rain water harvesting?



Watch Video Solution

333. Name two examples of green house gases which contribute maximum toward global warming.



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334. Why is lead compound added to petrol?

What is its harm?



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335. Name two fresh water sources which provide fresh water for human use.



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336. List main sources of water pollution.



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337. What are non-biodegradable substance?



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338. Define eutrophication. What is ill effect of eutrophication?



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339. What is biomagnification? Name two heavy metals which, when magnified resulted in diseases in humans.



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340. What do you mean by biological weathering? Give two examples.



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341. What is humus? What are its function?



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342. Name two measures which prevent the soil erosion.



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343. Differentiate between humification and mineralization.



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344. What do you mean by hygroscopic water and combined water in the soil ? Are these available to plants?



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345. Give two main sources of carbon.



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346. Explain carbon monoxide poisoning.



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347. Write down the composition of air.



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348. How does oxygen and carbon dioxide remain nearly constant in the atmosphere?



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349. How are winds produced?



Watch Video Solution

350. How is rain produced?



Watch Video Solution

351. Describe the major components of air pollution.





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352. Write a brief note acid rain.



[Watch Video Solution](#)

353. Explain what is smog. Give its effects.



[Watch Video Solution](#)

354. What are the effects of air pollution on human beings?



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355. In coastal area, wind current moves from the sea towards the land during day, but during night it moves from land to the sea. Discuss the reason.



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356. Give role of atmosphere in clamatic control.



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357. Briefly explain main layers of the atmosphere.



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358. Explain natural and human-made sources of air pollution.



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359. How are clouds formed?



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360. What is global warming? Give its effects.



Watch Video Solution

361. Explain ozone layer, its depletion and effects of ozone depletion.



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362. Write a brief note acid rain.



Watch Video Solution

363. What is rain water harvesting?



[Watch Video Solution](#)

364. What is climate?



[Watch Video Solution](#)

365. Define the weather.



[Watch Video Solution](#)

366. How are CFCs harmful?



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367. What is weathering? Elucidate in the various types of weathering.



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368. Define soil erosion. Give its causes, effects and preventive measures.



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369. How do organisms contribute in the formation of soil?



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370. Discuss how water is replenished in sea.



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371. Write a note on nitrogen fixation?



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372. How is nitrogen replenished in atmosphere.



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373. Describe the methods of carbon replenishment of atmosphere.



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374. What are the possible dangers of global warming?



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375. How is carbon dioxide concentration of atmosphere rising?



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376. Why ozone layer called ozone umbrella/shield ?



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377. What would be the effects on widening ozone hole?



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378. Explain water cycle in detail.



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379. Draw diagram of (i) nitrogen cycle, (ii) carbon cycle.



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380. Name four types of bacteria involved in nitrogen cycle.



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381. Draw a diagrammatic sketch of oxygen cycle in nature?



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382. Make sketch of hydrological cycle in nature.



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383. Why is air called breath of life?

Enumerate functions of air or atmosphere.



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384. Describe the causes and effects of air pollution.



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385. Explain ozone layer, its depletion and effects of ozone depletion.



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386. Give an account of various sources and harmful effects of water pollution.



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387. Explain the following : (i) Eutrophication,
(ii) Biomagnification.



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388. Why water is necessary for living organisms? Explain.



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389. What is soil? How does it form?



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390. Give various sources and harmful effects of soil pollution.



[Watch Video Solution](#)

391. Define soil erosion. Give its causes, effects and preventive measures.



[Watch Video Solution](#)

392. Describe nitrogen cycle.



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393. Mention briefly the role of decomposers of cycling of materials.



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394. In the early December 2012, Capital Delhi was in news for smog due to increased air

pollution. Smog resulted in reduced visibility and consequent road accidents, traffic jams, and also caused harmful effects to biotic components in the capital.

(i) What is smog? Is it primarily or secondary pollutant?

(ii) Justify by giving two reasons why is it harmful to human beings.



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395. Government efforts have resulted in increase in population of rhinoceros in some pockets in Northeast region of our country. These mammals consume foliage in large quantities and then move to nearby small water bodies where they defaecate. Recently these water bodies are witnessing algal blooms (or growth) and are getting ultimately choked of affecting even activities of rhinos.

(i) What is possible reason of algal growth in these water bodies? Name the process involved.

(ii) What will be consequence of excessive choking of water bodies with algal bloom.

(iii) List atleast one step that government must take to save such water bodies.



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396. It has been made mandatory to install rain water harvesting system and solar water heater in all buildings in urban areas.

(i) What is the rational when rain water already passes into drains?

(ii) Why are solar water heaters are being installed when electric geysers are available?



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397. Environment biologists have recently reported that (i) Carbon dioxide concentration in the atmosphere has reached more than 390 ppm. (ii) The antarctic and arctic waters are becoming acidic causing thinning of animals shells. (iii) Polar ice is melting (iv) some low lying islands have submerged in sea.

(a) What are the reasons behind all these changes occurring on earth?

(b) Suggest a mechanism to control the same and if possible to reverse the trend.



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398. On a school trip to an industrial estate, students found that the marble used in the office buildings has lost its shine and become pitted.

(i) What are the reasons of marble pitting?

(ii) Can this factor cause harm to vegetation as well?

Suggest methods to prevent this.



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399. (i) Razia saw excessive growth of blue - green algae in nearby pond of her village.

(ii) Fish which was previously in pond were nowhere to be seen.

(iii) The pond started to give a stink. Water of the pond changes its colour and is found to

be not suitable for cattle. Some of the cattle who visited the pond for drinking and bathing have faled sick.

(iv) What expianatient will Razia give for these anomalies to the paniced villagers.



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Tru Or False

1. Soil has no role in supplying nutrients to aquatic biota.



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Revision Questions

1. What would be the direction of air currents coming from Allahabad after it is intercepted by Himalaya in North?



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Short Answer Questions

1. How does the average temperature of Earth remain fairly steady?



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2. Set up an experiment to measure gain and loss of heat by water, sand and air.



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3. Explain the formation of convection currents.



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4. Enumerate the factors that influence movement of air.



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5. Describe biological water cycles.



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