

# **BIOLOGY**

# **BOOKS - VGS PUBLICATION-BRILLIANT**

## **BIO GEOCHEMICAL CYCLES**

Exercise

**1.** What is the importance of different biogeochemical cycles in the nature?



2. What emissions from human activities lead to ozone depletion? And what are the principal steps in stratospheric ozone depletion caused by human activities?



**3.** Why could we say that biogeochemical cycles are in "balance"?



**4.** If all the vegetation in the pond died, what effects would it have on the animals? Why?



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**5.** Write an experiment to prove greenhouse effect on temperature.



**6.** Go to near by pond observe organisms living in the pond and bio degradable substances mixing in water. How they effect on those organisms? Write your observation.



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**7.** Describe interdependence of biotic and abiotic components by taking Nitrogen cycle as an example.



8. Draw oxygen, water and nitrogen cycles.



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**9.** Write an essay explaining the importance of Ozone layer.



**10.** 'Burning of fossil fuels a concern for scientists and environmentalists" How do you support this statement?



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**11.** Prepare slogans on green house effect and read them out in the school assembly



**12.**  $Co_2$  play a vital role in plant life process" - comment?



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**13.** How human activities caused an imbalance in biogeochemical cycles?



**14.** List three ways we, as humans, have affected the water cycle.



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**15.** Prepare an article for newspaper on the item "How human activities effects the environment".



**16.** What is bio-geochemical cycle?



**17.** What are the differences between oxygen and ozone?



**18.** How mach percentage of water on the earth is present in the ocean?



**19.** Name few green house gases?



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**20.** What is denitrification?



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21. What is nitrification?



**22.** Name the three main processes by which oxygen is lost from the atmosphere.



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23. Why are root nodules useful for plants?



24. What is acid rain? How is it formed?



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**25.** Give the names of a few organisms that help in nitrogen fixation.



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**26.** List any three activities which would lead to an increase in the carbon dioxide content

of air. **Watch Video Solution** 27. Name few recently originated problems of environment. **Watch Video Solution** 28. What would happen if all oxygen present in the environment is converted to ozone? **Watch Video Solution** 

29. Expand CFC.....



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**30.** Expand B.O.D.



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**31.** What is the main concern of montreal protocol?



**32.** Which forms of nitrogen are taken up by plants from the soil?



**33.** Which is the most abundant element in the universe?



**34.** What is called UniversalSolvent?



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**35.** What are the uses of water?



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**36.** What is nitrification? What are the bacteria that participate in nitrification?



**37.** What is denitrification? Explain the process of denitrification?



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38. Explain briefly about greenhouse effect?



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39. What are the uses of oxygen?



**40.** What is Biochemical Oxygen Demand (BOD)?



**41.** State two harmful effects of Ozone hole or Ozone layer depletion.



**42.** What are the harmful effects of acid rain?

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**43.** What is the difference in fog and smog? Give two harmful effects of smog.



**44.** What is bad Ozone and good Ozone?



**45.** There is a mass mortality of fishes in a pond. What may be the reasons?



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**46.** Why is it said that nitrogen is very important for us?



**47.** Write about the sources of water on earth.

Why we are facing water shortage? Explain.



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**48.** What is water cycle?



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**49.** What is Nitrogen fixation? What is its importance?



**50.** What is ammonification ? Under which condition does ammonification occer?



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51. In which forms is carbon found on earth?



**52.** What is global warming? What are its effects?



**53.** Explain carbon cycle in nature with diagram.



**54.** Describe the oxygen cycle.

**55.** The flow of nutrients from living organisms to environment and from environment to living organisms occur through

- A. Biogeochemical cycles
- B. Biocycles
- C. Chemical cycles
- D. Geocycles

### **Answer:**



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## 56. The percentage of salt water on earth is

A. 3%

B. 1 %

 $\mathsf{C.}\,97\,\%$ 

D.  $2\,\%$ 

#### **Answer:**

**57.** The human body is composed of about how much water?

A. 80~%

B. 70~%

 $\mathsf{C.}\ 90\ \%$ 

D.  $10\,\%$ 

**Answer:** 

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**58.** These form integral part of basic organic compounds of life.

A. Nitrogen, hydrogen

B. Hydrogen, phosphorous

C. Hydrogen, oxygen

D. Nitrogen, oxygen

**Answer:** 



**59.** The element that is abundantly present in atmosphere is

- A. Oxygen
- B. Hydrogen
- $C.CO_2$
- D. Nitrogen

### **Answer:**



**60.** The free living bacteria that fixes nitrogen is

- A. Nitrosomonas
- B. Rhizobium
- C. Nitrobacter
- D. All the above

#### **Answer:**



**61.** Nitrogen makes its way back into the atmosphere through a process called-

- A. Ammonification
- B. Denitrification
- C. Assimilation
- D. Nitrification

#### **Answer:**



**62.** The excessive amount of nitrates and other nitrogenous compounds when they reach rivers and lakes cause too much growth of

- A. Bryophytes
- B. Fungi
- C. Algae
- D. Pteridophytes

### **Answer:**



**63.** It is reponsible for maintaining the earth as green-house with temperature conditions suitable for life?

- A. Oxygen
- B.  $CO_2$
- C. Hydrogen
- D. Nitrogen

### **Answer:**



64. The main reservoirs of carbon are -

A. Sedimentary rocks

B. Fossil fuels

C. Oceans

D. All the above

#### **Answer:**



**65.** Excessive amount of carbon dioxide and other green house gases has been emitted to the environment due to

- A. Burning of fossil fuels, deforestation
- B. Burning of fossil fuels, industrialization
- C. Deforestation, industrialization
- D. Burning of fossil fuels, deforestation, industrialization

#### **Answer:**



- A. Algae
- B. Virus
- C. Bacteria
- D. All the above

#### **Answer:**



### **67.** Decomposition of organic waste requires

- A. Hydrogen
- B. Oxygen
- C. Nitrogen
- D. Phosphorous

#### **Answer:**



**68.** The layer extends from the earth's surface up to about 10 kilometers in altitude is

- A. Stratosphere
- B. Ionosphere
- C. Mesosphere
- D. Troposphere

### **Answer:**



**69.** The number of oxygen atoms present in a molecule of ozone is-

- A. 2
- B. 3
- C. 4
- D. 5

**Answer:** 



**70.** Ozone layer absorbs these radiations of sun

- A. Infrared rays
- B. Ultraviolet rays
- C. Cosmic rays
- D. Gamma rays

### **Answer:**



**71.** These are responsible for destruction of ozone layer

- A. Pesticides
- B.  $CO_2$
- C. Chlorofluoro carbons
- D. Hydrogen

# Answer:



**72.** To protect ozone layer, the protocol emerged was

- A. Washington protocol
- B. Montreal protocol
- C. Vancover protocol
- D. Geneva protocol

### **Answer:**



ond is

- A. Carbon
- B. Nitrogen
- C. Hydrogen
- D. Phosphorous



<b>74.</b> Which	າ of the	following	organisms	is	a	free
living nitr	rogen fix	xer?				

- A. Rhizobium
- **B.** Nitrosomonas
- C. Mycorrhiza
- D. None



<b>75.</b> Which	n of th	e followin	g is	the	elemental
form of c	arbon?				

- A. Graphite
- B. Diamond
- C. Soot
- D. All the above



**76.** The elements that is common among proteins, DNA, RNA and Alkaloids ......

- A. Carbon
- B. Nitrogen
- C. Sulphur
- D. Mercury

### **Answer:**



A. Green			
B. Blue			
C. Yellow			
D. Pink			
Answer:			
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**77.** The colour of ozone is .....

**78.** Which of the following is not a green house gas?

- A.  $CO_2$
- B. CO
- $\mathsf{C}.\,CH_4$
- D.  $C_6H_6$

### **Answer:**



**79.** The percentage of  $CO_2$  in the atmosphere

is

- A. 0.04~%
- B.  $0.4\,\%$
- $\mathsf{C.}\ 0.08\ \%$

D. None of the above

### **Answer:**



**80.** Oxygen is returned to the atmosphere mainly by

- A. Respiration
- B. Photosynthesis
- C. Burning of wood
- D. Fungi

### **Answer:**



<b>81.</b> Ozone	layer is	getting	depleted	because o	of

- A. Automobiles
- B. Industrial units
- C. Compounds of fluorine and chlorine
- D. None



**82.** Which of the following is a green house gas?

- A.  $CO_2$
- B. CFCs
- $\mathsf{C}.\,CH_4$
- D. All the above

### **Answer:**



83. Montreal protocol substances on
A. Ozone depletion
B. Green house effect
C. Air pollution
D. Water pollution



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84. The main source of CFCs.....

- A. Refrigerators
- B. Air conditioners
- C. Jet Elights
- D. All the above



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**85.** Montreal protocol singed by 24 countries in the year......

- A. 1985
- B. 1984
- C. 1987
- D. 1990



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**86.** Copenhagen meeting on revise of montreal protocol was held in the year

1

B. 1992

C. 1995

D. 1996

# **Answer:**



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**87.** Direct exposure of U.V radiation causes

A. Skin cancer

- B. Destroys marine life
- C. Damage to crops
- D. All the above



- 88. The ozone hole is observed here
  - A. Pacific ocean
  - B. Indian ocean

- C. Antarctica region
- D. Arctic region



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**89.** These crops increase soil fertility

- A. Food
- B. Commercial
- C. Legume

D. Vegetable

### **Answer:**



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**90.** Symbiotic bacteria that fixes the nitrogen

is .....

A. Nitrosomonas

B. Nitrobactor

C. Micorrhiza

D. Rhizobium

### **Answer:**



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**91.** Carbon burried under the ocean floor might take this much of time to return to the atmosphere

A. 12 million

B. 14 Million

- C. 15 million
- D. 10 Million



- **92.** The atmospheric layer continues from 10 km to about 50 km is .....
  - A. Troposphere
  - B. Ionosphere

- C. Stratosphere
- D. None



- **93.** Which of the following is an inert gas?
  - A. Nitrogen
  - B. Oxygen
  - C. Methane

D. Xenon

### **Answer:**



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**94.** Large amount of fresh water is present in

A. Seas

B. Rivers

C. Polar ice caps

D. Lakes



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**95.** Very few animals and plants are present in deserts. Because

- A. There is sand
- B. There is very little water
- C. There are no roads
- D. It is hot in desert



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# 96. Hydrological cycle occurs between

- A. Land and air
- B. Air and sea
- C. Land and sea
- D. Land, sea and atmosphere

#### **Answer:**

