

BIOLOGY

BOOKS - ARIHANT PUBLICATION

OUR ENVIRONMENT

Question Bank

1. Any undesirable change in physical, chemical or biological characteristic of air, land, water or soil is called

- A. pollution
- B. ecological disturbance
- C. ecological deterioration
- D. adulteration

Answer: A



- 2. A pollutant can be best defined as it :
 - A. has natural geochemical cycle

- B. changes homeostasis of the natural environment
- C. disturb the natural flora of a place
- D. becomes stabilized in ecosystem forever

Answer: B



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3. Hydrogen sulphide causes

A. nausea

- B. eye irritation
- C. throat irritation
- D. all of these

Answer: D



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4. Which of the following is a secondary air pollutant?

A. Hydrocarbons

- B. smog
- C. particulate matter
- D. automobile exhausts

Answer: B



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5. Air pollutants

I.cause injury to all living organism

II.reduce growth and yield of crops and causes

premature death of plants

III.affects the respiratory system of humans and animals

Which of the statements given above are correct?

A. I and II

B. I and III

C. II and III

D. all of these

Answer: D



6. Sulphur dioxide causes

- A. asthma
- B. bronchitis
- C. emphysema
- D. all of these

Answer: D



7. Match the following columns

	Column I		Column II
A.	Primary pollutant	1.	DDT
В.	Secondary pollutant	2.	CO3
		3.	0,
		4.	o, so,
		5.	PAN

	Codes	
	Α	В
	(1) 1, 2, 3	4,5
	(2) 1, 2, 4	3, 5
	(3) 2, 3, 4	1,5
Δ	(4) 3, 5	1, 2, 4

В. 🗾

В
4, 5
3, 5
1, 5
1, 2, 4

	Codes	
	Α	В
	(1) 1, 2, 3	4,5
	(2) 1, 2, 4	3, 5
_	(3) 2, 3, 4	1,5
D.	(4) 3, 5	1, 2, 4

Answer: B



- **8.** Which of the following device is used to remove over 99% particulate matter present in the exhaust from a thermal power plant?
 - A. wet scrubbers
 - B. absorption
 - C. electrostatic precipitator
 - D. gravitational method

Answer: C



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9. Which of the following pollutant induces respiratory distress, inhibit ETS in chloroplast and glazing of leaves?

A. H_2S

B. PAN

C. CO

D. NO_2

Answer: A



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10. Which method is used for the removal of sulphur dioxide and ammonia from the polluted air ?

- A. Electrostatic precipitator
- B. wet scrubbers
- C. gravitational method
- D. absorption

Answer: B



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11. In almost all Indian metropolitan cities like

Delhi, the major atmospheric pollutant(s)

is/are

- A. Suspended particulate matter (SPM)
- B. oxides of sulphur
- C. carbon dioxide and carbon monoxide
- D. oxides of nitrogen

Answer: C



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12. Rain is called acid rain, when its pH is below

A. 7

B. 6.56

C. < 5.65

D. 11

Answer: C

13. Which of the following is / are the hazardous pollutant(s) present in automobile exhaust gases?

(i) N_2 (ii) CO

(iii) CH_4 (iv) Oxides of nitrogen

A. carbon monoxide

B. oxides of nitrogen

C. oxides of sulphur

D. both(1)(2)

Answer: D



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14. Which device is fitted to automobiles for reducing the emission of poisonous gases like NO_2 and CO?

A. catalytic converters

B. electrostatic precipitator

C. scrubber

D. bag filter

Answer: A



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15. Catalytic converters are fitted in to automobiles for reducing emission of poisonous gases, having expensive metals namely.

- A. platinum
- B. palladium
- C. rhodium
- D. all of these

Answer: D



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16. vehicles treated with catalytic converter should use lead free petrol because

- A. in petrol inactivates the catalyst
- B. increases the burning of petrol
- C. decreases the efficiency of vehicles
- D. is a heavy metal

Answer: A



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17. Catalytic converters are fitted into automobiles to reduce emission of harmful

gases. Catalytic convertes change unburnt hydrocarbons into

A. carbon dioxide and water

B. carbon monoxide

C. methane

D. carbon dioxide and methane

Answer: A



18. List any two adverse effects of particulate matter on human health.

A. irritation

B. inflammation

C. damage of lungs and premature deaths

D. all of these

Answer: D



)

- A. carbon content
- B. sulphur content
- C. nitrogen content
- D. phosphorus content

Answer: B



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20. What is true about the Euro II norms?

- A. it stipulates to control sulphur at 350 ppm in diesel and 150 ppm in petrol
- B. it stipulates to reduce sulphur level to 50ppm in petrol and diesel
- C. it stipulates to reduce sulphur level to 200ppm in diesel and petrol
- D. none of the above

Answer: A



21. In which year Air (Prevention and Control of Pollution) Act was amended to include noise as an air pollutant?

- A. 1992
- B. 1963
- C. 1949
- D. 1987

Answer: D



22. The noise pollution is measured in	asured in:	is meas	on is	pollut	noise	The	22.
---	------------	---------	-------	--------	-------	-----	-----

- A. decibels
- B. amperes
- C. fathoms
- D. ohm

Answer: A



23. Which act was formulated in the year 1974?

A. the water (prevention and control of pollution)act

B. the air(prevention and control of pollution)act

C. the noise (prevention and control of pollution)act

D. the environment (protection)act

Answer: A

24. Which one of the following is the heavy toxic metal present in waste water from industries?

A. mercury

B. cadmium

C. lead

D. all of these

Answer: D

25. Which of the following compounds are well known for biological magnification?

A. DDT

B. Mercury

C. methane

D. both(1)(2)

Answer: D



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26. Biomagnification is highest in

A. producers

B. primary consumers

C. secondary consumers

D. decomposers

Answer: C



27. Increase in concentration of the toxicant at successive trophic levels, cause :-

- A. eutrophication
- B. accelerated eutrophication
- C. biomagnification
- D. algal bloom

Answer: C



28. Shell of egg in bird becomes thin (not properly formed)due to the pollution caused by DDT pesticide .this occurs due to disturbed

- A. calcium metabolism
- B. phosphorus metabolism
- C. sodium metabolism
- D. potassium metabolism

Answer: A



29. Addition of phosphate and nitrates /fertiliser into water and that water ultimately draining into lake firstly affects

A. growth of aquatic organisms in lake

B. eutrophication of lake

C. the environment of lake

D. organic remains deposited on the lake

bottom

Answer: C



30. Eutrophication is excessive growth of algae ,plants and animals in water bodies due to nutrient enrichment particularly with

A. nitrogen and phosphorus

B. calcium and phosphorus

C. sodium and calcium

D. nitrogen and calcium

Answer: A



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31. Nutrient enrichment of a lake will cause

A. eutrophication

B. stratification

C. biomagnification

D. bioaccumulation

Answer: A



32. The amount of biodergradable organic matter in sewage water can be estimated by measuring

- A. biological oxygen demand
- B. biochemical oxygen demand
- C. the growth of microorganism in water
- D. the growth of bacteria in water

Answer: A



- **33.** Measuring Biochemical Oxygen Demand (BOD) is a method used for
 - A. measuring the activity of saccharomyces

 cerevisiae in producing curd on a

 commercial scale
 - B. working out the efficiency of RBCS about their capacity to carry oxygen
 - C. estimating the amount of organic matter in sewage water

D. working out the efficiency of oil driven automobile engines

Answer: C



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34. The term 'terror of Bengal' is used for

A. eichhornia crassipes

B. excessive growth of in water decreased

biological oxygen demand

C. biomagnification

D. algal bloom

Answer: A



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35. Consider the following statements about pollution

I.Pollution is an undesirable change in physical ,chemical or biological characteristics of air ,land ,water or soil

II.the air act was amended in 1987 to include noise as air pollutant

III.In order to control environmental pollution
the government of India has passed the
environment protection Act ,1976 to protect
and improve the quality of our environment
Which of the statements given above are
correct?

A. I,II

B. I,III

C. II and III

D. all of these

Answer: D



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36. Match the following columns

	Column I		Column II
A.	Paper, leather, textile, rubber	1.	Municipal solid wastes
В.	Scraps, flyash	2.	Industrial solid wastes
C.	Hazardous wastes containing disinfectants and other chemicals	3.	Hospital solid wastes

Answer: C



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37. Three mile Island and Chernobyl incident are related to

- A. radioactive wastes
- B. industrial wastes
- C. municipal wastes
- D. hospital wastes

Answer: A



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38. High level radioactive waste can be managed in which of the following ways?

- A. open dumping
- B. composting
- C. incineration
- D. dumping in sealed containers



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39. What steps should be taken before the disposal of nuclear waste?

A. nuclear waste should be pretreated

B. in should be stored in shielded containers

C. in should be buried about 500m deep with

D. all of these

Answer: D



40. Electrostatic precipitator (ESP)

I.is an electrical device to remove particulate matter present in the exhaust of thermal power plant

II.More than 99% particulate matter can be removed by this method

III.ESP has electrode wires and a stage of collecting plates

which of the statements given above are correct?

A. land II

- B. I and III
- C. II and III
- D. all of these



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41. Consider the following statements about scrubber

I.It is used to remove gases like carbon dioxide from industrial exhaust

II.In a scrubber the exhaust is passed through a spray of water or lime

III.water dissolves gases and lime reacts with sulphur dioxide to form a precipitate of calcium sulphate and sulphide

Which of the statements given above are correct?

A. land II

B. land III

C. II and III

D. all of these

Answer: C



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42. Match the following columns

	Column I		Column II
A.	Catalytic converter	1.	Particulate matter
B.	Electrostatic precipitator	2,	Carbon monoxide and nitrogen oxides
C.	Scrubber	3.	Aerosol and smoke
D.	Particulate poliutant	4.	Sulphur dioxide

Codes

A B C D A B C D

(1) 1 4 3 2 (2) 2 1 4 3

(3) 4 3 2 1 (4) 4 2 1 3

Answer: B



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43. Consider the following statements

I.Noise causes psychological disorder in

humans

II.Noise causes physiological disorder in

humans

III.Noise is measurable unit in dB but sometimes it is measured in Dobson unit

IV.150 dB is tolerable for human

Which of the above statements are true?

A. I and IV

B. I and II

C. I,ii and IV

D. I and III

Answer: B



44. Match the following columns

	Column I		Column II
A.	Suspended solids	1.	Nitrates, ammonia, phosphate, sodium and calcium
В.	Colloidal materials	2.	Faecal matter, bacteria, paper and cloth fibres
C.	Dissolved materials	3.	Sand, silt and clay





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45. Consider the following statements

I.Algal blooms are formed by free floating algae

II.Algal bloom causes fish mortality and deterioration of water quality

III.Water hyacinth the world's most

problematic aquatic weed is also called "Terror of Bengal"

Which of the statements given above are correct about algal blooms?

A. I,II

B. I,III

C. II and III

D. all of these

Answer: D



46. Match the following columns

Column I		Column II	
A.	Biodegradable organic matter	1.	Terror of Bengal
В.	DDT	2.	BOD
C.	Phosphates	3.	Biomagnification
D.	Water hyacinth	4.	Eutrophication

Answer: B

47. Consider the following statements about harmful effects of radioactive pollution
I.Radiations from nuclear wastes causes mutation at a very high rate
II.At high doses nuclear radiations are lethal
III.at low doses radiation cause disorders and cancer

Which of the statements given above are

correct?

- A. I and II
- B. I and III
- C. II and III
- D. all of these



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48. What did Chernobyl, Three Mile Island, the Love Canal, and Bhopal, India all have in common?

- A. they were all radioactive disasters
- B. they were environmental problems caused by global warming
- C. they were involved environmental racism
- D. they were all technological disasters caused by pollution



49. atmospheric gases are found to trap the sun's heat near the earth's surface and keep it warm. This effect is called

- A. global warming
- B. ozone depletion
- C. greenhouse effect
- D. El nino effect

Answer: C



50. Which of the following gases are the contributor to the greenhouse effect?

I.Carbon dioxide

II.Methane gas

III.Nitrous oxide

Oxygen

A. I,II III

B. II,III,IV

C. I,III,IV

D. I,II,III



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51. Carbon dioxide is called greenhouse gas because it is :

A. used in greenhouse to increase plant growth

- B. transparent to heat but traps sunlight
- C. transparent to sunlight but traps heat

D. transparent to both sunlight and heat

Answer: C



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52. CO_2, CH_4, N_2O and CFCs are called greenhouse gases because they and emit:

A. UV rays

B. heat rays

C. X rays

D. gamma rays

Answer: B



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53. Which one of the following is a incorrect statement?

A. Greenhouse effect is a natural phenomenon

- B. Eutrophication is a natural phenomenon in fresh water bodies
- C. most of the forests have been lost in tropical areas
- D. ozone in upper part of atmosphere is harmful to animals



54. Which one of the following in the correct percentage of the two (out of the total of 4) green house gases that contribute to the total global warming?

A. CFCs14 $\%CH_{420}~\%$

B. $CO_{240}~\%$, CFCs30~%

C. $N_2O6~\%$, $CO_{286}~\%$

D. $CH_420~\%$, $N_2O18~\%$

Answer: A



Water video Solution

55. Which of the following are the harmful effect of global warming I.The temperature of the earth has increased by $0.6\,^{\circ}\,C$ in last three decades which will lead to change in precipitation patterns II.This rise in temperature will lead to the increased melting of polar ice caps which will cause the rise in sea level and many coastal areas will be submerged

III.Increased temperature will lead to increase

weed growth eruption of diseases and pests thus crop productivity will decrease

- A. I and II
- B. I and III
- C. II and III
- D. all of these

Answer: D



56. Read the following statements carefully and select the correct ones I.UV rays are essential for the production as well as degradation of ozone gas II.Ozone present in ionosphere acts as a shield absorbing UV radiation coming from the sun III.One fourth of the incoming solar radiation is reflected by the atmospheric gases and clouds and only half of the incoming solar

radiation falls on the earth surface heating it

of this only a small portion is reflected back

- A. I and II
- B. I and III
- C. II and III
- D. all of these

Answer: B



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57. What is the phenomenon of gradual increase in global temperature called?

- A. global warming
- B. greenhouse effect
- C. ozone degradation
- D. montreal protocol

Answer: A



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58. Which of the following is not as consequence of global warming?

A. rising sea level

B. increased agricultural productivity worldwide

C. worsening health effects

D. increased storms frequency and intensity

Answer: B



59. The El Nino effect is related to

A. global warming

B. acid rain

C. greenhouse gases

D. all of these

Answer: A



60. "Bad ozone" is found in

A. atmosphere

B. ionosphere

C. stratosphere

D. troposphere

Answer: D



- **61.** Which statement represent the harmful effect of depletion of earth's ozone layer
 - A. the average temperature of earth's surface will increase gradually
 - B. the oxygen content of the atmosphere will decrease
 - C. increased amount of ultraviolet radiation will reach earth's surface

D. sea levels will rise as the polar ice caps will gradually melt

Answer: C



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62. Which of the following is a prime health risks associated with greater UV radiation through the atmosphere due to depletion of stratospheric ozone

- A. damage to digestive system
- B. increased liver cancer
- C. neurological disorder
- D. increased skin cancer

Answer: D



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63. निम्नलिखित में से कौन-सी रासायनिक अभिक्रिया सन्तुलित है?

A.
$$CFCl_3
ightarrow CFCl_2 + Cl$$

B.
$$CF_2Cl_2 o CF_2ClCl$$

C.
$$NO + O_3
ightarrow NO_3 + O$$

D.
$$NO_2 + O_3
ightarrow NO_3 + O_2$$

Answer: B



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64. Which of the following synthetic chemicals is responsible for ozone layer depletion?

A. SO_2

B. chlorofluorocarbon

C. HCl

D. photochemical smog

Answer: B



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65. Which of the following statement is not correct

- A. ozone layer do not allow UV-B to reach the earth surface
- B. ozone hole is an actual hole over antarctica
- C. halons are ozone depleting substances
- D. the active chlorine destroys ozone and convert it into \mathcal{O}_2

Answer: B



66. Montreal protocol aims at:

A. reduction of ozone depleting substances

B. biodiversity conservation

C. control of water pollution

D. control of CO_2 emission

Answer: A



67. In ecosystem, cycling of nutrients is called

A. carbon cycle

B. geochemical cycle

C. biogeochemical cycle

D. chemical cycle

Answer: C



68. The amount of nutrients , such as carbon , nitrogen , phosphorus , calcium , etc . Present in the soil at any given time I reffered to as

- A. standing crop
- B. standing state
- C. nutrient crops
- D. sediment

Answer: B



69. From the statements given below identify

the causes of soil erosion

I.strong winds

II.contour ploughing

III.deforestation

IV.step farming

V.improper cultivation practices

A. I,II,IV and V

B. II and IV

C. I,III and V

D. II,IV and V

Answer: C



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70. The reservoir for the gaseous type of biogeochemical cycle exists in

A. stratosphere

B. atmosphere

C. ionosphere

D. lithosphere

Answer: B



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71. The reservoir for the sedimentary cycle exists in

A. earth crust

B. organic sediments

C. calcareous sediments

D. limestone

Answer: A



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72. Match the following columns

	Column I		Column II
A.	Standing state	1.	Carbon cycle
B.	Gaseous cycle	2.	Sulphur cycle
C.	Sedimentary cycles	3.	Species that invade a bare area
D.	Pioneer species	4.	Amount of nutrients

Codes

A B C D

(1) 1 2 3 4

(2) 4 1 2 3

(3) 4 1 3 2

A. (4) 3 4 1 2 Vindo

Codes

A B C D

(1) 1 2 3 4

(2) 4 1 2 3

(3) 4 1 3 2

B. 4931/41 2 Vindows

Codes

A B C D

(1) 1 2 3 4

(2) 4 1 2 3

(3) 4 1 3 2

(4) 3 4 1 2 a

C. Attivate Wind

Codes

A B C D

(1) 1 2 3 4

(2) 4 1 2 3

(3) 4 1 3 2

D. Attached to the authority of the

Answer: B



73. Which of the following is a gaseous cycle?

A. sulphur cycle

B. phosphorus cycle

C. nitrogen cycle

D. all of these

Answer: C



74. Which of the following pair is a sedimentary type of biogeochemical cycle?

- A. carbon and nitrogen
- B. phosphorus and sulphur
- C. phosphorus and nitrogen
- D. phosphorus and oxygen

Answer: B



75. Which of the following pair is a sedimentary type of biogeochemical cycle?

A. nitrogen and carbon cycle

B. phosphorus and carbon cycle

C. nitrogen and sulphur cycle

D. sulphur and carbon cycle

Answer: A



76. Which one are the reservoirs of sulphur and carbon cycles respectively?

- A. atmosphere and consumers
- B. earth crust and atmosphere
- C. earth crust and producer
- D. atmosphere and predator

Answer: B



77. Out of the following biogeochemical cycles			
which one is gaseous			
I.sulphur			
II.phosphorus			
III.nitrogen			
IV.carbon			
Choose the correct option			
A. only I			
B. only II			
C. ONLY IV			
D. III and IV			

Answer: D



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78. Out of the following which component can occur in all three states liquid ,solid and gaseous form

A. water

B. phosphorus

C. carbon

D. oxygen

Answer: A



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79. Which of the following biogeochemical cycle has a major reservoir in sedimentary rock

- A. carbon cycle
- B. hydrologic cycle
- C. nitrogen cycle
- D. phosphorus cycle

Answer: D



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80. Assertion (A): A Suspended Particulate Matter (SPM) is an important pollutant released by diesel vehicles.

Reason (R): Catalytic converters greatly reduce pollution caused by automobiles.

A. Both Assertion and Reason are correct

and Reason is the correct explanation of

Assertion

B Both Assertion and Reason are correct but Reason is not the correct

explanation of Assertion

C. Assertion is correct but Reason is incorrect

D. Assertion is incorrect but Reason is correct

Answer: A



81. Assertion: Agriculture output increased several times after introduction of DDT.

Reason: DDT was the first insecticide used on a wide scale.

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

B. Both Assertion and Reason are correct
but Reason is not the correct

explanation of Assertion

C. Assertion is correct but Reason is incorrect

D. Assertion is incorrect but Reason is correct

Answer: A



- **82.** Assertion (A): The concentration of methane in the atmosphere has more than doubled in the last 250 years.
- Reason (R): Wetlands and rice fields are the major sources of methane.
 - A. Both Assertion and Reason are correct and Reason is the correct explanation of Assertion
 - but Reason is not the correct

B. Both Assertion and Reason are correct

explanation of Assertion

C. Assertion is correct but Reason is incorrect

D. Assertion is incorrect but Reason is correct

Answer: B



83. Assertion (A): Methane component of greenhouse gases contributing to global warming is about 20 per cent.

Reason (R): Introduction of multi-point fuel injection engines in automobiles has decreased methane content in the exhausts.

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

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

C. Assertion is correct but Reason is incorrect

D. Assertion is incorrect but Reason is correct

Answer: B



84. Assertion (A): Presently, the global atmosphere is warming up.

Reason (R): The depletion of stratospheric ozone layer has resulted in increase in ultraviolet radiations reaching the Earth.

- A. Both Assertion and Reason are correct and Reason is the correct explanation of Assertion
- B. Both Assertion and Reason are correct but Reason is not the correct

explanation of Assertion

C. Assertion is correct but Reason is incorrect

D. Assertion is incorrect but Reason is correct

Answer: D



85. Assertion (A): UV radiation causes photodissociation of ozone into O_2 and O, thus causing damage to the stratospheric change.

Reason (R): Ozone hole is resulting in global warming and climate change.

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

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

C. Assertion is correct but Reason is incorrect

D. Assertion is incorrect but Reason is correct

Answer: B



- **86.** Assertion (A): Deforestation is one main factor contributing to global warming.
- Reason (R): Besides CO_2 , two other gases methane and CFCs are also included under greenhouse gases:
 - A. Both Assertion and Reason are correct and Reason is the correct explanation of Assertion
 - B. Both Assertion and Reason are correct but Reason is not the correct

explanation of Assertion

C. Assertion is correct but Reason is incorrect

D. Assertion is incorrect but Reason is correct

Answer: B



87. Assertion Nutrient cycle means cycling of glucose or reserved food material within the plant body

Reason Transfer of biogenetic nutrients between living and non-living components is called biogeochemical cycle.

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

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

C. Assertion is correct but Reason is incorrect

D. Assertion is incorrect but Reason is correct

Answer: B



