

NEET ENVIRONMENTAL ISSUES — WATER POLLUTION AND ITS CONTROL (BOD, EUTROPHICATION) — PYQS

Max. Marks: 92

Questions: 23

Section A (MCQ) — 23 questions

Q.1 Which one of the following statements is NOT correct? [NEET (UG) 2023]

- (1) Algal blooms caused by excess of organic matter in water improve water quality and promote fisheries
- (2) Water hyacinth grows abundantly in eutrophic water bodies and leads to an imbalance in the ecosystem dynamics of the water body
- (3) The amount of some toxic substances of industrial waste water increases in the organisms at successive trophic levels
- (4) The micro-organisms involved in biodegradation of organic matter in a sewage polluted water body consume a lot of oxygen causing the death of aquatic organisms

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Q.2 Which of the following statements is correct? [NEET (UG) 2023]

- (1) Biomagnification refers to increase in concentration of the toxicant at successive trophic levels.
- (2) Presence of large amount of nutrients in water restricts 'Algal Bloom'
- (3) Algal Bloom decreases fish mortality
- (4) Eutrophication refers to increase in domestic sewage and waste water in lakes.

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Q.3 Match the items given in **column I** with those in **column II** and select the correct option given below. [NEET 2018]

Column I		Column II	
a.	Eutrophication	i.	UV-B radiation
b.	Sanitary landfill	ii.	Deforestation
c.	Snow blindness	iii.	Nutrient enrichment
d.	Jhum cultivation	iv.	Waste disposal

- (1) (a)-(ii), (b)-(i), (c)-(iii), (d)-(iv)
- (2) (a)-(i), (b)-(iii), (c)-(iv), (d)-(ii)
- (3) (a)-(iii), (b)-(iv), (c)-(i), (d)-(ii)
- (4) (a)-(i), (b)-(ii), (c)-(iv), (d)-(iii)

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Q.4 A river with an inflow of domestic sewage rich in organic waste may result in - [NEET 2016 (Phase 1)]

- (1) Death of fish due to lack of oxygen
- (2) Increased population of aquatic food web organisms
- (3) Drying of the river very soon due to algal bloom
- (4) An increased production of fish due to biodegradable nutrients

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Q.5 Biochemical Oxygen Demand (BOD) may not be a good index for pollution for water bodies receiving effluents from [NEET 2016 (Phase 2)]

- (1) petroleum industry (2) sugar industry
- (3) domestic sewage (4) dairy industry

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Q.6 A lake which is rich in organic waste may result in [NEET 2016 (Phase 2)]

- (1) mortality of fish due to lack of oxygen
- (2) increased population of fish due to lots of nutrients
- (3) increased population of aquatic organisms due to minerals
- (4) drying of the lake due to algal bloom

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Q.7 The highest DDT concentration in aquatic food chain shall occur in [NEET 2016 (Phase 2)]

- (1) crab (2) Phytoplankton
- (3) eel (4) seagull

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Q.8 Eutrophication of water bodies leading to killing of fishes is mainly due to nonavailability of

[AIPMT 2015]

- (1) light (2) food
(3) essential minerals (4) oxygen

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Q.9 High value of BOD (Biochemical Oxygen Demand) indicates that : [AIPMT 2015 (Cancelled)]

- (1) water is highly polluted
(2) consumption of organic matter in the water is higher by the microbes
(3) water is pure
(4) water is less polluted

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Q.10 Measuring biochemical oxygen demand (BOD) is a method used for [AIPMT 2012 (Prelims)]

- (1) Working out the efficiency of oil driven automobile engines
(2) Estimating the amount of organic matter in sewage water
(3) Measuring the activity of *Saccharomyces cerevisiae* in producing curd on a commercial scale
(4) Working out the efficiency of R.B.Cs. about their capacity to carry oxygen

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Q.11 Eutrophication is often seen in :

[AIPMT 2011 (Prelims)]

- (1) Ocean (2) Mountains
(3) Deserts (4) Fresh water lakes

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Q.12 When domestic sewage mixes with river water

[AIPMT 2010 (Mains)]

- (1) The river water is still suitable for drinking as impurities are only about 0.1%
(2) Small animals like rats will die after drinking river water
(3) The increased microbial activity releases micro-nutrients such as iron
(4) The increased microbial activity uses up dissolved oxygen

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Q.13 Biochemical Oxygen Demand (BOD) in a river water :

[AIPMT 2009]

- (1) Gives a measure of *Salmonella* in the water
(2) Has no relationship with concentration of oxygen in the water
(3) Increases when sewage gets mixed with river water
(4) Remains unchanged when algal bloom occurs

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Q.14 DDT residues are rapidly passed through food chain causing biomagnification because DDT is :

[AIPMT 2009]

- (1) Moderately toxic
(2) Water soluble
(3) Non-toxic to aquatic animals
(4) Lipo soluble

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Q.15 A lake near a village suffered heavy mortality of fishes within a few days. Consider the following reasons for this:

- (i) Lots of urea and phosphate fertilizer were used in the crops in the vicinity
(ii) The area was sprayed with DDT by an aircraft
(iii) The lake water turned green and stinky
(iv) Phytoplankton populations in the lake declined initially thereby greatly reducing photosynthesis

Which two of the above were the main causes of fish mortality in the lake? [AIPMT 2008]

- (1) (i), (ii) (2) (iii), (iv) (3) (i), (iii) (4) (ii), (iii)

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Q.16 In which one of the following the BOD (Biochemical Oxygen Demand) of sewage (S), distillery effluent (DE), paper mill effluent (PE) and sugar mill effluent (SE) have been arranged in ascending order? [AIPMT 2007]

- (1) $SE < PE < S < DE$ (2) $SE < S < PE < DE$
(3) $PE < S < SE < DE$ (4) $S < DE < PE < SE$

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Q.17 Which one of the following is not a bioindicator of water pollution? [AIPMT 2007]

- (1) Blood-worms (2) Stone flies
(3) Sewage fungus (4) Sludge-worms

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Q.18 Limit of BOD prescribed by Central Pollution Control Board for the discharge of industrial and municipal waste waters into natural surface waters, is - [AIPMT 2006]

- (1) < 30 ppm (2) < 3.0 ppm
(3) < 100 ppm (4) < 10 ppm

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Q.19 Which of the following is not used for disinfection of drinking water ? [AIPMT 2005]

- (1) Chloramine (2) Ozone
(3) Chlorine (4) Phenyle

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Q.20 Common indicator organism of water pollution is :- [AIPMT 2004]

- (1) *Escherichia coli*
(2) *Lemna paucicostata*
(3) *Entamoeba histolytica*
(4) *Eichhornia crassipes*

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Q.21 Fluoride pollution mainly affects :- [AIPMT 2003]

- (1) Heart (2) Kidney (3) Brain (4) Teeth

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Q.22 *Escherichia coli* is used as an indicator organism to determine pollution of water with :- [AIPMT 2003]

- (1) Faecal matter
(2) Pollen of aquatic plants
(3) Heavy metals
(4) Industrial effluents

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Q.23 Which of the following is absent in polluted water? [AIPMT 2002]

- (1) Larva of stone fly (2) *Hydrilla*
(3) Blue-green algae (4) Water hyacinth

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ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	1	1	3	1	1	1	4	4	2	2	4
Ques.	12	13	14	15	16	17	18	19	20	21	22
Ans.	4	3	4	1	3	2	1	4	1	4	1
Ques.	23										
Ans.	1										