

IASbaba's Daily Prelims Test [Day 30]

Topic- Environment, India Year Book and Current Affairs

1. Consider the following statements

1. It is world's most problematic aquatic weed
2. It is also called Terror of Bengal

Above statements fits for?

1. *Eichhornia*
2. *Azolla*
3. *Wolffia*
4. *Trapa*

Solution- 1

You may have seen the beautiful mauve-colored flowers found on very appealingly-shaped floating plants in water bodies. These plants which were introduced into India for their lovely flowers have caused havoc by their excessive growth by causing blocks in our waterways. They grow faster than our ability to remove them. These are plants of water hyacinth (*Eichhornia crassipes*), the world's most problematic aquatic weed, also called 'Terror of Bengal'. They grow abundantly in eutrophic water bodies, and lead to an imbalance in the ecosystem dynamics of the water body.

NCERT- class 12th bio- environmental issues- chapter 16

2. Consider the following statements

1. The Biological Oxygen Demand (BOD) is the measure of organic matter present in the water.
2. Greater the BOD, lesser is the polluting potential.
3. Microbes in sewage treatment plants increases the BOD of the effluent

Which of the above are NOT correct?

1. 1 and 2
2. 2 and 3
3. Only 3
4. Only 2

Solution- 2

Greater the BOD more is the polluting potential. Actually, in secondary treatment or biological treatment of sewage water in plant, the primary effluent is passed into large aeration tanks where it is constantly agitated mechanically and air is pumped into it. This allows vigorous growth of useful aerobic microbes into flocs (masses of bacteria associated with fungal filaments to form mesh like structures). While growing, these microbes consume the major part of the organic matter in the effluent. This significantly reduces the BOD (biochemical oxygen demand) of the effluent. BOD refers to the amount of the oxygen that would be consumed if all the organic matter in one litre of water were oxidised by bacteria. The sewage water is treated till the BOD is reduced.

3. Match the following list of bioactive substances and their roles:

Bioactive Substance

Role

- | | |
|------------------|---|
| 1. Statin | i. Removal of oil stains |
| 2. Cyclosporin A | ii. Removal of clots from blood vessels |
| 3. Streptokinase | iii. Lowering of blood cholesterol |
| 4. Lipase | iv. Immuno-suppressive agent |

Choose the correct match:

1. 1-iii, 2-iv, 3-ii, 4-i
2. 1-ii, 2-iv, 3-iii, 4-i
3. 1-i, 2-ii, 3-iii, 4-iv
4. 1-iv, 2-iii, 3-ii, 4-i

Solution- 1

Chapter 10, Bio-12th

4. Consider the following

1. Azotobacter
2. Pseudomonas
3. Nostoc
4. Anabaena
5. Thiobacillus

Which of the above is NOT a nitrogen fixing organism?

1. 2 and 5
2. 1, 2, and 5
3. 2, 4 and 5
4. 1, 3, 4 and 5

Solution- 1

2 and 5 are denitrifying bacteria and rest are nitrogen fixing organism

NCERT- BIO, class 12th, chapter 10

5. Methanogens are common in Wetlands and are responsible for marsh gas. Consider the following w.r.t it

1. They are also found in ruminants of animals but not in human
2. They play significant role in aerobic wastewater treatment
3. They produce oxygen, carbon dioxide, hydrogen sulphide and methane

Choose the correct options

1. 1, 2 and 3
2. 1 and 2
3. 2 and 3
4. None

Solution- 4

They are common in wetlands, where they are responsible for marsh gas, and in the digestive tracts of animals such as ruminants and humans, where they are responsible for the methane content of belching in ruminants and flatulence in humans.

Moreover, the methanogenic archaea populations play an indispensable role in anaerobic wastewater treatments.

They are anaerobic organisms and cannot function under aerobic conditions

NCERT- BIO-12th, Chapter 10

6. Match the items in Column 'A' and Column 'B' and choose correct answer.

Column A

1. Lady bird
2. Mycorrhiza
3. Biological control
4. Biogas

Column B

- (i) Methano bacterium
- (ii) Trichoderma
- (iii) Aphids
- (iv) Glomus

The correct answer is:

1. 1-ii, 2- iv, 3- iii, 4- i
2. 1-iii, 2- iv, 3- ii, 4- i
3. 1-iv, 2- i, 3- ii, 4- iii
4. 1-iii, 2- ii, 3- i, 4- iv

Solution- 2

Lady bird and Butterflies are used to get rid of Aphids. Fungi are also known to form symbiotic associations with plants (mycorrhiza). Many members of the genus Glomus form mycorrhiza. A biological control being developed for use in the treatment of plant disease is the fungus Trichoderma. Trichoderma species are free-living fungi that are very common in the root ecosystems. They are effective biocontrol agents of several plant pathogens. Methanobacterium is related to Biogas

6. Use of certain chemicals and radiation to change the base sequence of genes of crop plant is termed as

1. Mutation breeding
2. Transgenic mechanism
3. Recombinant DNA technology
4. Gene Therapy

Solution- 1

NCERT-Bio-12th, chapter 9

7. If your COW is producing average MILK as compared to the cow of other breed, the best method to increase its efficiency would be?

1. In-breeding
2. Out-breeding
3. Out-crossing
4. None

Solution- 3

This is the practice of mating of animals within the same breed, but having no common ancestors on either side of their pedigree up to 4-6 generations. The offspring of such a mating is known as an out-cross. It is the best breeding method for animals that are below average in productivity in milk production, growth rate in beef cattle, etc.

NCERT-Bio-12th, chapter 9

8. Which one of the following is not a fungal disease?

1. Rust of wheat
2. Smut of Bajra
3. Black rot of crucifers
4. Red rot of sugarcane

Solution- 3

Black rot is caused by a bacteria, *Xanthomonas campestris* pv. *campestris*, that can infect most crucifer crops at any growth stage. This disease is difficult for growers to manage and is considered the most serious disease of crucifer crops worldwide

9. Consider the statements

1. Dinitrogen and dioxygen are main constituents of air but do not react at normal temperature
2. Nitrous oxide does not contribute to Green House Gases but excess of nitrogen dioxide can retard the rate of photosynthesis.

Select the WRONG statement/s

1. Only 1
2. Only 2
3. Both
4. None

Solution- 2

They contribute to GHGs

10. Match the following

Column 1

1. Oxides of Sulphur
2. Nitrogen dioxide
3. Carbon Dioxide
4. Nitrate in drinking water
5. Lead

Column 2

- i. Global Warming
- ii. Damage to Kidney
- iii. Blue Baby Syndrome
- iv. Respiratory diseases
- v. Red haze in traffic

Select the correct code

1. 1-iv, 2-v, 3-i, 4-iii, 5-ii
2. 1-v, 2-iv, 3-i, 4-ii, 5-iii
3. 1-v, 2-ii, 3-i, 4-iv, 5-iii
4. 1-iii, 2-iv, 3-i, 4-v, 5-ii

Solution- 1

11. Which of the following departments come under Ministry of Finance?

1. Disinvestment
2. Revenue
3. Expenditure
4. Consumer Affairs
5. Commerce

Select the correct code

1. 1, 2, 3 and 5
2. 2, 3, 4 and 5
3. 1, 2 and 3
4. 3, 4 and 5

Solution- 3

12. Consider the following statements

1. Phillips curve is direct relation of unemployment and inflation.
2. It explains deflation and hyperinflation much better than stagflation

Which of the above is/are NOT correct?

1. Only 1
2. Only 2
3. Both
4. None

Solution- 3

Inverse relation between unemployment and inflation- Phillips curve

Stagflation is the combination of high unemployment and economic stagnation with inflation.

13. Consider the following statements

1. The highest population of Scheduled Tribes in India lives in Andhra Pradesh
2. There are more Scheduled Tribe's in India than Scheduled Caste's

Select the correct statement/s

1. Only 1
2. Only 2
3. Both
4. None

Solution- 4

Highest population of ST's- MP

More SC's than ST's

14. Heinz Award is given in the field of

1. Art
2. Environment
3. Public Policy
4. Mathematics
5. Technology

Select the correct code

1. 1, 2, 3, 4 and 5
2. 2, 3, 4 and 5
3. 1, 2, 3 and 5
4. 1, 2, 4 and 5

Solution- 3

It is awarded in - Arts and Humanities; Environment; Human Condition; Public Policy; and Technology, the Economy and Employment.

15. Consider the statements

1. West Bank is more close to Mediterranean Sea while Gaza Strip is far
2. Gaza strip is more close to Mediterranean Sea than Dead sea
3. West Bank is close to Dead Sea than Mediterranean Sea
4. Gaza Strip is close to Dead Sea than Mediterranean Sea

Identify the correct statement/s

1. 1 and 4
2. 2 and 3
3. 1 and 3
4. 2, 3 and 4

Solution- 2

GAZA Strip is adjacent to Mediterranean Sea and West Bank is close to Dead Sea