

**ENVIRONMENT, SC and tech, CA**

1. Which of the statements given below is/are correct with reference to the Genetic Engineering Appraisal Committee (GEAC)?

1. It is responsible for the appraisal of activities involving large scale use of hazardous microorganisms and recombinants in research related to the agriculture field only.
2. It functions under the Department of Biotechnology.
3. It is chaired by the Special Secretary/Additional Secretary of MoEF&CC.

Select the correct answer using the code given below:

- a) 2 and 3 only
- b) 1 and 3 only
- c) 2 only
- d) 3 only**

2. Consider the following statements:

1. Bioremediation is the use of synthetic chemicals to degrade environmental contaminants into less toxic forms.
2. Incineration is a combustion process in the absence of oxygen or the material burnt under a controlled oxygen atmosphere.
3. Pyrolysis is the process of burning waste in large furnaces at high temperature in the presence of oxygen.

Which of the statements given above are correct?

- a) 2 and 3 only
- b) 1 and 3 only
- c) 1, 2 and 3
- d) None of the above**

3. Which of the following is/are regarded as particulate pollutants?

1. Bacteria
2. Fungi
3. Algae
4. Dust

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 2 and 4 only
- c) 4 only
- d) 1, 2, 3 and 4**

4. Consider the following statements regarding the harmful effects of water pollutants:

1. Fluoride causes erosion of bones and teeth.
2. Lead is associated with liver and kidney damage.
3. Blue-baby syndrome is associated with potassium contamination.

Which of the statements given above are correct?

- a) 1 and 2 only**
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

5. Consider the following description:

The gas is a lung irritant that can lead to an acute respiratory disease in children, is toxic to living tissues, harmful to various textile fibres and metal. It produces an irritant red haze in the traffic and congested places.

Which gas is being described in the above description?

- a) Sulfur dioxide
- b) Nitrogen dioxide**
- c) Ammonia
- d) Carbon monoxide

6. Consider the following statements with reference to the Green Climate Fund:

1. It is the world's largest climate fund mandated to support developing countries raise and realize their Nationally Determined Contributions.
2. It is mandated to invest 50% of its resources to mitigation and 50% to adaptation in grant equivalent.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2**
- d) Neither 1 nor 2

7. Which of the following statements regarding the effects of gaseous air pollutants is **not** correct?
- Sulphur dioxide causes stiffness of flower buds which fall off from the plants.
  - The red haze in traffic is due to the existence of oxides of Nitrogen.
  - Hydrocarbon pollutants are formed by incomplete combustion of fuel.
  - Carbon dioxide binds with haemoglobin in blood to form carboxyhemoglobin.**
8. World Conservation Strategy, adopted in 1980, aimed at:

- Maintenance of essential ecological processes.
- Protection of genetic diversity.
- Sustainable use of species and ecosystem.

Which of the statements given above are correct?

- 1 and 2 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3**

9. Consider the statements with reference to the 'Central Pollution Control Board':

- It has been established as an autonomous body under the Environment Protection Act, 1986.
- It coordinates the activities of State Pollution Control Boards and resolves disputes among them.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2**
- Neither 1 nor 2

10. Consider the following statements:

- Pyrolysis is the process of thermal conversion of organic matter in the presence of oxygen.
- Gasification is a thermo-chemical process that converts biomass into a combustible gas in the absence of oxygen.
- The process of gasification generally needs more temperature than pyrolysis.

Which of the statements given above is/are correct?

- 1 only
- 2 and 3 only
- 3 only**
- None of the above

11. „Singularity“, „Ergosphere“ and „Schwarzschild radius“, astronomical terms sometimes mentioned in the news are related to

- Exoplanets
- Asteroids
- Mini satellites
- Blackholes**

12. Consider the following statements:

- A cloned animal is not the same as a genetically modified animal.
- A cloned animal shares the same DNA as another animal, while a genetically modified animal has had a change made to its DNA.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2**
- Neither 1 nor 2

13. Consider the following statements with reference to fuel cells:

- In fuel cells, hydrogen-rich fuel and oxygen are used to generate electricity
- Fuel cells produce electricity in the form of direct current (DC)
- Hydrogen fuel cells are more energy efficient compared to diesel engines.

Which of the statements given above is/are correct?

- 1 only
- 2 and 3 only
- 1 and 2 only
- 1, 2 and 3**

14. Which of the statements is/are correct regarding the recently conducted Coastal Defence Exercise – Sea Vigil 21?

1. It is a tri-service exercise involving assets of the Indian Navy, Indian Army and Indian Air Force.
2. It is undertaken along the entire coastline including the Exclusive Economic Zone (EEZ) of the country.

Select the correct answer using the code given below.

- (a) 1 only  
(b) **2 only**  
(c) Both 1 and 2  
(d) Neither 1 nor 2

15. Consider the following statements with reference to the intermolecular interactions between the different states of matter:

1. Intermolecular forces tend to keep the molecules of different states of matter together.
2. Thermal energy of the molecules tends to keep the molecules of different states of matter apart.

Which of the statements given above is/are correct?

- (a) 1 only  
(b) 2 only  
(c) **Both 1 and 2**  
(d) Neither 1 nor 2

16. Consider the following statements regarding an adult stem cell:

1. They can make identical copies of themselves for long periods of time.
2. They are rare and their primary functions are to maintain the steady-state functioning of a cell called homeostasis.

Which of the statements given above is/are correct?

- (a) 1 only  
(b) 2 only  
(c) **Both 1 and 2**  
(d) Neither 1 nor 2

17. "Athlete's Foot" is a disease caused by

- (a) Bacteria  
(b) **Fungus**  
(c) Protozoan  
(d) Nematode

18. Where is DNA contained in the Human body?

1. Blood
2. Urine
3. Brain cells
4. Saliva
5. Feces

Select the correct answer using the code given below.

- (a) 1, 2 and 4 only  
(b) 2 and 3 only  
(c) 1, 3, 4 and 5 only  
(d) **1, 2, 3, 4 and 5**

19. An ELISA test may be used to diagnose:

1. HIV
2. Lyme Disease
3. Rotavirus
4. Syphilis
5. Pernicious anemia

Select the correct answer using the code given below.

- (a) 1, 2 and 3 only  
(b) 2, 3 and 4 only  
(c) 1, 4 and 5 only  
(d) **1, 2, 3, 4 and 5**

20. Which of the following is used in a fluorescent lamp to produce visible light?

- (a) **Mercury vapour**

(b) Phosphor

(c) Helium

(d) Astatine

21. With reference to the Start-Up Village Entrepreneurship Programme (SVEP), consider the following statements:

1. It is implemented by the Ministry of Commerce and Industry.

2. It caters to 3 pillars : finances, incubation and skill ecosystem.

Which of the statements given above is/are not correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

22. Consider the following statements

1. Russia is the world's largest producer of oil as well as the largest exporter.

2. Venezuela has the world's largest oil reserves.

Which of the given above statements is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

23. Which of the following exceptions are allowed under Most-favoured-nation (MFN) status?

1. Countries can set up a free trade agreement that applies only to goods traded within the group.

2. Countries can give developing countries special access to their markets.

3. Countries can raise barriers against products that are considered to be traded unfairly from specific countries.

Select the correct answer using the code given below:

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

24. 'Sanskritisation' recently seen in the news, it refers to:

(a) Doctorate degree in Sanskrit language

(b) Temporary settlements at Himalayas

(c) Change in the hierarchical caste system

(d) Pilgrimage Tax

25. With reference to Cheetah Action Plan, consider the following statements:

1. Cheetahs will be reintroduced into Kuno Palpur National Park.

2. Kuno Palpur National Park is situated in Karnataka.

Which of the statements given above is/are not correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2