

CUET UG 2024 Environmental Studies Question Paper (SET B) with Solutions

Q1. Match List-I with List-II (Authors and Works):

List-I (Author)

- (A) Gary Snyder
- (B) Wendell Berry
- (C) Rachel Carson
- (D) Barry Commoner

List-II (Book/Poem)

- (I) Mountains and Rivers Without End
- (II) The Closing Circle
- (III) Silent Spring
- (IV) A Place on Earth

1. (A)-(IV), (B)-(I), (C)-(III), (D)-(II)
2. (A)-(I), (B)-(IV), (C)-(III), (D)-(II) Solution.
3. (A)-(II), (B)-(IV), (C)-(III), (D)-(I)
4. (A)-(IV), (B)-(II), (C)-(III), (D)-(I)

Solution. (2)(A)-(I), (B)-(IV), (C)-(III), (D)-(II), Gary Snyder's works include "Mountains and Rivers Without End," Wendell Berry's "A Place on Earth," Rachel Carson's "Silent Spring," and Barry Commoner's "The Closing Circle."

Q2. Match List-I with List-II (Concepts and Proponents):

- **List-I (Concept)**
 - (A) Ecology
 - (B) Ecosystem
 - (C) Human population growth
 - (D) Hot spots
 - **List-II (Proposed by)**
 - (I) Norman Myers
 - (II) Ernst Haeckel
 - (III) Sir Arthur Tansley
 - (IV) T. R. Malthus
1. (A)-(I), (B)-(IV), (C)-(II), (D)-(III)
 2. (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
 3. (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
 4. (A)-(IV), (B)-(I), (C)-(III), (D)-(II)

Solution. (3)(A)-(II), (B)-(III), (C)-(IV), (D)-(I), Ernst Haeckel proposed "Ecology," Sir Arthur Tansley introduced the "Ecosystem" idea, T. R. Malthus investigated human population growth, and Norman Myers found biodiversity hotspots.

Q3. The ecological thought focused on saving forests for their utility rather than their innate value is known as?

1. Deep ecology
2. Social ecology
3. Eco-feminism
4. Shallow ecology **Solution.**

Solution. (4)**Shallow ecology** advocates nature protection for human purposes such as giving oxygen and increasing air quality, as opposed to deep ecology, which appreciates nature fundamentally.

Q4. Which of the following is not a major goal of the World Wildlife Fund (WWF)?

1. To conserve world biological diversity
2. Sustainable use of renewable natural resources

3. Reduction of pollution and wasteful consumption
4. Creating a worldwide fund for education Solution.

Solution. (4)Creating a worldwide fund for education,The WWF focuses on conservation and sustainability, not on establishing a global education fund.

Q5. The first Earth Day was celebrated on?

1. 20 April 1970
2. 22 April 1970 Solution.
3. 05 June 1970
4. 20 April 1972

Solution. (2)22 April 1970,Earth Day was originally marked on April 22, 1970, to promote environmental protection.

Q6. The plants and animals that cannot maintain a constant internal environment are called?

1. Regulators
2. Migraters
3. Conformers Solution.
4. Suspenders

Solution. (3)Conformers, Conformers are unable to maintain their internal circumstances, therefore their body temperature and osmotic balance vary with the surroundings.

Q7. The number of individuals of the same species that have come into a habitat from elsewhere is referred to as?

1. Emigration
2. Immigration Solution.
3. Natality
4. Mortality

Solution. (2)Immigration, Immigration is the movement of people into a population from outside sources.

Q8. Which statements are correct regarding succession?

1. (A), (B) and (D) only
2. (A), (B), (C) and (D)
3. (A), (B) and (C) only
4. (B), (C) and (D) only

Solution. (2) (A), (B), (C) and (D) Pioneer species enter barren regions (primary succession), while secondary succession is determined by environmental factors.

Q9. Match List-I with List-II (States and National Parks):

List-I (State)

- (A) Madhya Pradesh
- (B) Arunachal Pradesh
- (C) Meghalaya
- (D) Tamil Nadu

List-II (National Park)

- (I) Namdapha National Park
- (II) Guindy National Park
- (III) Nokrek National Park
- (IV) Kuno National Park

1. (A)-(IV), (B)-(I), (C)-(III), (D)-(II)
2. (A)-(IV), (B)-(III), (C)-(II), (D)-(I)
3. (A)-(IV), (B)-(I), (C)-(II), (D)-(III)
4. (A)-(I), (B)-(IV), (C)-(II), (D)-(III)

Solution. (1)(A)-(IV), (B)-(I), (C)-(III), (D)-(II), Kuno National Park is located in Madhya Pradesh, Namdapha in Arunachal Pradesh, Nokrek in Meghalaya, and Guindy in Tamil Nadu.

Q10. Which soil has high water retention capacity?

1. Sandy soil
2. Loamy soil
3. Sandy silt soil
4. Clayey soil Solution.

Solution. (4) **Clayey soil**, Clayey soil has small particles and tightly packed spaces, making it capable of holding water.

Q11. Which factors affect the soil respiration process?

1. (A), (C) and (E) only
2. (A), (B), (C) and (D) only Solution.
3. (B), (C) and (D) only
4. (A), (B), (C), (D) and (E)

Solution. (2)(A), (B), (C) and (D) only, Temperature, moisture, aeration, and the amount of bacteria all influence soil respiration.

Q12. Which is not a criteria air pollutant under NAAQS?

1. CO₂ Solution.
2. CO
3. O₃
4. Pb

Solution. (1) **CO₂**, CO₂ is not classified as a criterion air pollutant under India's National Ambient Air Quality Standard.

Q13. The disease "Itai-Itai" is caused by contamination of drinking water with?

1. Mercury
2. Cadmium Solution.
3. Arsenic
4. Chromium

Solution. (2) Cadmium, "Itai-Itai" is caused by cadmium toxicity, which is commonly caused by mining runoff contaminating water.

Q14. Photochemical smog formation requires?

1. Smoke, water vapour and low temperature
2. NO_x, SO₂ and high temperature
3. NO_x, VOCs and high temperature **Solution.**
4. Smoke, NO_x and low temperature

Solution. (3) NO_x, VOCs and high temperature Photochemical smog is formed when nitrogen oxides (NO_x) and volatile organic compounds (VOCs) react in sunlight.

Q15. Arrange the stages of primary succession of plants (last to first).

1. (A), (B), (C), (D)
2. (C), (A), (B), (D)
3. (D), (B), (A), (C)
4. (A), (C), (B), (D)

Solution. (1) (A), (B), (C), (D) , Water's primary succession progresses from reed swamp to submerged vegetation, marsh meadows, and phytoplankton.

Q16. Match List-I with List-II (Forest Acts/Policies and Year):

List-I (Forest Act/Policy)

- (A) Forest Act
- (B) National Forest Policy
- (C) Forest Conservation Act
- (D) Wildlife Protection Act

List-II (Year)

- (I) 1927
- (II) 1988
- (III) 1980
- (IV) 1972

1. (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
2. (A)-(II), (B)-(III), (C)-(I), (D)-(IV)
3. (A)-(IV), (B)-(II), (C)-(III), (D)-(I)
4. (A)-(III), (B)-(I), (C)-(II), (D)-(IV)

Solution. (1)(A)-(I), (B)-(II), (C)-(III), (D)-(IV) , The years correspond to the legislation: the Forest Act (1927), the National Forest Policy (1988), the Forest Conservation Act (1980), and the Wildlife Protection Act (1972).

Q17. Arrange in increasing dry weight in a biomass pyramid (grassland ecosystem).

1. (A), (B), (C), (D)
2. (A), (C), (B), (D)
3. (D), (C), (B), (A)
4. (D), (C), (A), (B)

Solution. (1)(A), (B), (C), (D), Producers (plants) produce the most biomass, followed by primary, secondary, and tertiary consumers.

Q18. "Curitiba," a city in Brazil, is famous for?

1. Organic farming practices
2. Water network projects implementation
3. Integrated transport network system **Solution.**
4. Solid waste disposal system

Solution. (3)Integrated transport network system, Curitiba is widely renowned for its successful and sustainable urban transportation system.

Q19. Which gas contributes the least to global warming?

1. N₂O
2. NO₂
3. CFCs **Solution.**
4. CH₄

Solution. (3) CFCs,CFCs contribute less to global warming than other greenhouse gasses such as methane and nitrous oxide.

Q20. Nomadic movements are not considered migrations because people move from one place to another?

1. For economic reasons
2. For social factors
3. Without any intention to settle **Solution.**
4. For physical reasons

Solution. (3)Without any intention to settle, Nomads move seasonally or periodically without intending to permanently settle in a new location, so their movement is not considered migration.

Q21. Which does not explain the relationship between human development and economic development?

1. Capability expansion through economic growth
 2. Capability expansion through poverty reduction
 3. Capability expansion through social services
 4. Capability expansion through environmental degradation
- Solution.**

Solution. (4)Capability expansion through environmental degradation, Human and economic progress should be sustainable and do not harm the environment, hence environmental deterioration is not a relevant consideration.

Q22. The Gandhian economy model does not contain elements of?

1. Multiplication of needs **Solution.**
2. Rejection of class-war
3. Protectionism
4. Nationalism

Solution. (1) Multiplication of needs, The Gandhian approach emphasizes simplicity and minimizing one's demands, hence "multiplication of needs" goes against this concept.

Q23. The most suitable method for safe disposal of hospital solid waste is?

1. Dumping
2. Incineration Solution.
3. Pyrolysis
4. Composting

Solution. (2) Incineration, Incineration is a controlled process that burns medical waste, minimizing its dangerous impact.

Q24. Arrange the processes from start to end in a food distribution system:

1. (A), (B), (C), (D)
2. (C), (B), (A), (D)
3. (A), (B), (D), (C)
4. (C), (B), (A), (D)

Solution. (4) (C), (B), (A), (D) Food distribution starts with storage, then processing, packaging, and lastly marketing.

Q25. Which is an incorrect statement about GDP?

1. GDP does not measure the sustainability of growth.
2. GDP helps understand whether the economy is growing or contracting.
3. GDP reflects annual trends of inflation and prices of commodities. Solution.
4. GDP helps understand shifts in the country's economy.

Solution. (3)GDP reflects annual trends of inflation and prices of commodities. GDP quantifies economic activity, but it does not immediately reflect inflation or price movements, which are measured separately using other indicators.

Q26. Match List-I with List-II (Protocols/Conventions and Year):

List-I (Protocol/Convention)

- (A) Kyoto Protocol**
- (B) Montreal Protocol**
- (C) Bamako Convention**
- (D) Basel Convention**

List-II (Year)

- (I) 1987**
- (II) 1997**
- (III) 1989**
- (IV) 1998**

1. (A)-(IV), (B)-(I), (C)-(II), (D)-(III)
2. (A)-(IV), (B)-(I), (C)-(III), (D)-(II)
3. (A)-(I), (B)-(IV), (C)-(III), (D)-(II)
4. (A)-(II), (B)-(I), (C)-(IV), (D)-(III) **Solution.**

Solution. (4)(A)-(II), (B)-(I), (C)-(IV), (D)-(III), The Kyoto Protocol was signed in 1997, the Montreal Protocol in 1987, the Bamako Convention in 1998, and the Basel Convention in 1989.

Q27. Petroleum in sedimentary rocks that can be drilled is categorized as?

1. **Actual resources**
2. **Potential resources** **Solution.**
3. **Stock resources**
4. **Reserve resources**

Solution. (2)Potential resources, Potential resources are those that are known to exist but have not yet been utilized.

Q28. Common water storage methods in Bihar are?

1. (A) and (C) only
2. (B) and (D) only **Solution.**
3. (A) and (B) only
4. (C) and (D) only

Solution. (2)(B) and (D) only ,Bihar's historic water storage systems include "Ahar" and "Pynes."

Q29. The diversity of organisms sharing the same community is called?

1. Beta diversity
2. Gamma diversity
3. Alpha diversity **Solution.**
4. Genetic diversity

Solution. (3)Alpha diversity, Alpha diversity refers to the diversity of species found in a given environment or ecosystem.

Q30. Which is not a basic pillar of sustainable development?

1. Environmental preservation
2. Social equity
3. Economic growth
4. Urbanization **Solution.**

Solution. (4)Urbanization,Urbanization is a process, not a basic pillar of sustainable development, that considers environmental, social, and economic factors.

Q31. Which is a Kharif crop?

1. Wheat
2. Rice **Solution.**

3. Cucumber
4. Mustard

Solution. (2) Rice, Rice is a common Kharif crop that grows during the rainy season.

Q32. The concept of Joint Forest Management does not include?

1. Government works closer with local people to manage forests.
2. Locals use forest resources in return for protecting ecosystems.
3. The infrastructure development at the cost of forest resources.
Solution.
4. Sustainable conservation of forests.

Solution. (3)The infrastructure development at the cost of forest resources. Joint Forest Management strives to conserve forests rather than create infrastructure at their expense.

Q33. The environment's ability to absorb and render harmless waste is called?

1. Source function of ecosystem
2. Sink function of ecosystem Solution.
3. Carrying capacity of ecosystem
4. Optimal capacity of ecosystem

Solution. (2)Sink function of ecosystem, The "sink function" describes the environment's ability to handle waste and absorb pollution.

Q34. A main characteristic of perpetual resources is?

1. Consumption at a fast rate
2. Continuous availability at a limited rate Solution.

3. Unconditional availability
4. Not formed naturally

Solution. (2)Continuous availability at a limited rate, Perpetual resources, such as sunlight, are always available, but at a certain pace.

Q35. Arrange the radiation types in increasing order of wavelength:

1. (C), (B), (A), (D), (E)
2. (A), (B), (C), (E), (D)
3. (A), (B), (C), (D), (E)
4. (E), (D), (C), (B), (A)

Solution. (1)(C), (B), (A), (D), (E) ,UV-C has the shortest wavelength, followed by UV-B, UV-A, infrared, and microwave.

Q36. A bee-keeper in an orchard enabling pollination is an example of?

1. Negative production externalities
2. Negative consumption externalities
3. Positive production externalities **Solution.**
4. Positive consumption externalities

Solution. (3)Positive production externalities, Bees' pollination service boosts crop output, resulting in a net benefit.

Q37. Arrange atmospheric layers from Earth's surface upwards:

1. (E), (C), (B), (D), (A)
2. (E), (C), (B), (A), (D)
3. (E), (B), (C), (A), (D) **Solution.**
4. (E), (B), (C), (D), (A)

Solution. (3) (E), (B), (C), (A), (D)The layers stretch from the troposphere (Earth's surface) to the mesopause.

Q38. Which is associated with ozone destruction in the stratosphere?

1. (A) and (E) only
2. (A), (B) and (E) only **Solution.**
3. (A), (C) and (D) only
4. (A), (B), (C) and (E) only

Solution. (2)(A), (B) and (E) only, CFCs, polar stratospheric clouds, and Cl radicals all contribute significantly to ozone degradation.

Q39. Which are examples of resources?

1. (A) and (D) only
2. (A), (B) and (D) only
3. (A), (B) and (C) only
4. (A), (B), (C) and (D) **Solution.**

Solution. (4) (A), (B), (C) and (D), Materials, energy, knowledge, and services are all forms of resources.

Q40. Which treaty prohibits the import of hazardous waste into African nations?

1. The Basel Convention
2. The Capetown Convention
3. The Bamako Convention **Solution.**
4. The Madagascar Convention

Solution. (3)The Bamako Convention, The Bamako Convention forbids the importation of hazardous waste into African countries.

Q41. Continuous increase of productivity in lakes eventually causes?

1. Biomagnification in lakes
2. Bioaccumulation in lakes
3. Eutrophication in lakes Solution.
4. Bioconcentration in lakes

Solution. (3)Eutrophication in lakes, Eutrophication is caused by excessive nutrient enrichment in water bodies, resulting in algal overgrowth and oxygen depletion, both of which impair aquatic life.

Q42. Dissolved oxygen in water?

1. Remains constant in winter and summer
2. Remains low in winter and high in summer
3. Remains high in winter and low in summer Solution.
4. Doesn't depend on the temperature of water

Solution.(3)Remains high in winter and low in summer, Cold water may store more dissolved oxygen than warm water, hence oxygen levels are higher in the winter than in the summer.

Q43. Excess suspended particles in lake water due to agricultural runoff result in?

1. High salinity
2. High turbidity Solution.
3. High dissolved oxygen
4. High BOD

Solution. (2) High turbidity ,Turbidity rises due to the presence of suspended particles, reducing water clarity and harming aquatic life.

Q44. Water in lakes with high algal and phytoplankton growth is expected to have?

1. High dissolved oxygen
2. High dissolved oxygen and high BOD

3. Low dissolved oxygen and high BOD Solution.
4. Low dissolved oxygen and low BOD

Solution. (3)Low dissolved oxygen and high BOD, Excessive algal growth reduces dissolved oxygen levels due to high biological oxygen demand (BOD) when the algae disintegrate.

Q45. Which of the following is a limiting nutrient in lakes and ponds?

1. Iron
2. Phosphorus Solution.
3. Magnesium
4. Sulphur

Solution. (2)Phosphorus Phosphorus is frequently the limiting nutrient in freshwater habitats because it encourages algae growth when present in abundance.

Q46. The available biomass for consumption by herbivores and decomposers is referred to as?

1. Primary production
2. Gross primary productivity
3. Net primary productivity Solution.
4. Secondary productivity

Solution.(3)Net primary productivity, Net primary productivity (NPP) refers to the biomass that remains after plants have consumed some energy for respiration and is accessible to herbivores and decomposers.

Q47. The rate of production of organic matter during photosynthesis is referred to as?

1. Primary production
2. Gross primary productivity Solution.

3. Net primary productivity
4. Standing crop

Solution. (2)Gross primary productivity ,Gross primary productivity (GPP) refers to the entire quantity of organic matter produced by photosynthesis before it is consumed for respiration.

Q48. The interaction between sea anemones and clownfish is an example of?

1. Both species are benefitted **Solution.**
2. Both are harmed
3. One is harmed and the other is benefitted
4. One is benefitted and the other remains unaffected

Solution. (1) Both species are benefitted ,This is an example of mutualism, meaning that both the clownfish and the sea anemone benefit from the interaction.

Q49. The species interaction in which both interacting species are harmed is referred to as?

1. Predation
2. Parasitism
3. Competition **Solution.**
4. Mutualism

Solution.(3)Competition, In competition, both species suffer because they compete for the same limited resources, lowering their fitness.

Q50. Mycorrhizal association between fungi and the roots of higher plants is best referred to as?

1. Commensalism
2. Amensalism
3. Mutualism **Solution**
4. Competition

Solution. (3) Mutualism ,Mycorrhiza is a mutualistic association in which fungi help plants absorb nutrients while the plants offer carbohydrates to the fungi.