

Question Paper Preview

Notations :

- Options shown in green color and with ✓ icon are correct.
- Options shown in red color and with ✗ icon are incorrect.

Question Paper Name :	Paper II Environmental Science
Subject Name :	Paper II Environmental Science
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Paper II Environmental Science

Group Number :	1
Group Id :	63068028484
Group Maximum Duration :	0
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Paper II Environmental Science

Section Id :	63068058629
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	150
Number of Questions to be attempted :	150
Section Marks :	300
Section Negative Marks :	0.66
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	63068076018
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 6306801242524 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

The optical efficiency of a solar thermal collector is defined as:

Options :

- ✗ fraction of the rays reflected from the mirror to solar radiation absorbed in the absorber
- ✓ ratio of solar radiation absorbed in the absorber to intercepted by the collector aperture
- ✗ ratio of solar radiation transmitted from the absorber to intercepted by the collector aperture
- ✗ transmittance of glass envelope of absorber to solar radiation absorbed in the absorber

Question Number : 2 Question Id : 6306801242546 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Two statements are given, labelled as Assertion (A) and Reason (R). Select the correct option with reference to the statements.

Assertion (A): Photovoltaic detectors normally use silicon solar cells measuring the short circuit current.

Reason (R): Photovoltaic detectors generate a voltage proportional to the temperature difference between the hot and cold junctions.

Options :

- ✓ Both A and R are true and R is the correct explanation of A
- ✗ Both A and R are true but R is not the correct explanation of A
- ✗ A is true but R is false
- ✗ A is false but R is true

Question Number : 3 Question Id : 6306801242769 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Floating Drum Type Biogas Plants are _____ Type Biogas Plants.

Options :

1. ✘ Constant Volume
2. ✔ Constant Pressure
3. ✘ Constant Temperature
4. ✘ Constant Enthalpy

Question Number : 4 Question Id : 6306801242859 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

In which biomass conversion technologies can pelletization, briquetting and the fuel extraction process be seen?

Options :

1. ✘ Direct Combustion
2. ✔ Physical Method
3. ✘ Bio-chemical Method
4. ✘ Thermo-chemical Method

Question Number : 5 Question Id : 6306801242498 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

The part of solar radiation that reaches the earth's surface with no change in direction is called:

Options :

1. ✔ beam radiation
2. ✘ diffuse radiation
3. ✘ arbitrary radiation
4. ✘ thermal radiation

Question Number : 6 Question Id : 6306801242515 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

In a solar air heating system, the flow rate through an air collector and storage loop is a compromise between _____ and _____.

Options :

1. ✔ pressure drop; energy transfer to the air stream
2. ✘ temperature drop; energy transfer to the air stream
3. ✘ volume drop; energy transfer to the air stream
4. ✘ temperature drop; energy transfer to the water stream

Question Number : 7 Question Id : 6306801242532 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

_____ is a solar collector using the absorption of solar radiation at the bottom of a 2 m to 3 m deep body of water to generate low-temperature heat.

Options :

1. ✔ Non convecting solar pond
2. ✘ Solar photovoltaic
3. ✘ Solar desalination
4. ✘ Solar distillation

Question Number : 8 Question Id : 6306801242574 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Two statements are given, labelled as Assertion (A) and Reason (R). Select the correct option with reference to the given statements.

Assertion A: Heliostats consist of several mirror panels supported on a steel structure.

Reason R : The heliostat focal length is approximately equal to the distance of the heliostat from the receiver.

Options :

1. ✔ Both A and R are true and R is the correct explanation of A
2. ✘ Both A and R are true but R is not the correct explanation of A
3. ✘ A is true but R is false
4. ✘ A is false but R is true

Question Number : 9 Question Id : 6306801242614 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Two statements are given, labelled as Assertion (A) and Reason (R). Select the correct option with reference to the given statements.

Assertion A: PV devices are solid state.

Reason R: Therefore, PV devices are rugged and simple in design and require very little maintenance.

Options :

1. Both A and R are true and R is the correct explanation of A
2. Both A and R are true but R is not the correct explanation of A
3. A is true but R is false
4. A is false but R is true

Question Number : 10 Question Id : 6306801242845 Question Type : MCQ Option Shuffling : Yes Correct Marks : 2 Wrong Marks : 0.66

Two statements are given below. Select the correct option with reference to the statements.

Statement 1: Floating Drum Type Biogas Plant is also called Janata Model Biogas Plant.

Statement 2: Fixed Dome Type Biogas Plant is also called Khadi Village Industries Commission.

Options :

1. Only Statement 1 is correct
2. Only Statement 2 is correct
3. Both Statement 1 and Statement 2 are correct
4. Both Statement 1 and Statement 2 are incorrect

Question Number : 11 Question Id : 6306801242510 Question Type : MCQ Option Shuffling : Yes Correct Marks : 2 Wrong Marks : 0.66

What is the role of an insulator in Liquid flat plate collector (LFPC)?

Options :

1. To minimise heat loss from the back and the sides
2. To facilitate the flow of heat-transfer fluid
3. To maximise heat loss from the back and the sides
4. To facilitate the incident solar radiation

Question Number : 12 Question Id : 6306801242537 Question Type : MCQ Option Shuffling : Yes Correct Marks : 2 Wrong Marks : 0.66

Photovoltaic (PV) conversion is the direct conversion of:

Options :

1. sunlight into electricity
2. sunlight into heat energy
3. sunlight into latent heat storage energy
4. kinetic energy into mechanical energy

Question Number : 13 Question Id : 6306801242567 Question Type : MCQ Option Shuffling : Yes Correct Marks : 2 Wrong Marks : 0.66

Match the following columns.

A. Direct Solar Radiation	P. Instrument used to measure solar radiation
B. Diffuse Solar Radiation	Q. Combination of beam radiation and diffuse radiation
C. Solar Insolation	R. Radiation undergoes solar attenuation
D. Pyranometer	S. Radiation does not undergo solar attenuation

Options :

1. A-S, B-R, C-Q, D-P
2. A-P, B-R, C-Q, D-S
3. A-S, B-P, C-Q, D-R
4. A-Q, B-R, C-S, D-P

Question Number : 14 Question Id : 6306801242581 Question Type : MCQ Option Shuffling : Yes Correct Marks : 2 Wrong Marks : 0.66

Two statements are given, labelled as Assertion (A) and Reason (R). Select the correct option with reference to the given statements.

Assertion (A): A pyranometer (solar radiation measurement instrument) has a hemispherical view of the surroundings.

Reason (R): Therefore, pyranometer is used to measure the total, direct, and diffuse solar radiation on a surface.

Options :

1. Both A and R are true and R is the correct explanation of A
2. Both A and R are true but R is not the correct explanation of A
3. A is true but R is false
4. A is false but R is true

Question Number : 15 Question Id : 6306801286175 Question Type : MCQ Option Shuffling : Yes Correct Marks : 2 Wrong Marks : 0.66

Which of the following best defines eco-planning?

Options :

1. ✘ Economic planning for industries
2. ✘ Social welfare planning
3. ✔ Systematic approach to environmental resource management
4. ✘ Political boundary planning

Question Number : 16 Question Id : 6306801287459 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which soil horizon is characterised by maximum biological activity?

Options :

1. ✔ A horizon (topsoil)
2. ✘ B horizon (subsoil)
3. ✘ C horizon (parent material)
4. ✘ E horizon (eluviated layer)

Question Number : 17 Question Id : 6306801377269 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following best describes the role of soil organic matter in ecosystems?

Options :

1. ✘ Reducing soil erosion exclusively in arid regions
2. ✘ Serving as a habitat for deep-sea organisms
3. ✔ Enhancing soil fertility and water retention
4. ✘ Promoting the growth of salt-tolerant plant species

Question Number : 18 Question Id : 6306801287979 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which soil texture classification has the highest water retention capacity?

Options :

1. ✘ Sandy loam
2. ✔ Clay
3. ✘ Silt
4. ✘ Pure sand

Question Number : 19 Question Id : 6306801292138 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Match the following environmental strategies with their corresponding benefits.

Strategy

- A) Organic farming
- B) Water conservation
- C) Crop rotation
- D) Use of biofertilisers

Benefit

- 1) Reduces pesticide usage
- 2) Ensures sustainable irrigation
- 3) Prevents soil degradation
- 4) Enhances soil microbial activity

Options :

1. ✔ A-1, B-2, C-3, D-4
2. ✘ A-4, B-3, C-1, D-2
3. ✘ A-2, B-1, C-4, D-3
4. ✘ A-3, B-4, C-2, D-1

Question Number : 20 Question Id : 6306801377296 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the primary goal of eco-friendly soil management programs?

Options :

1. ✘ To maximise short-term agricultural yields
2. ✔ To preserve soil fertility for long-term productivity
3. ✘ To eliminate the use of all fertilisers
4. ✘ To promote rapid urbanisation

Question Number : 21 Question Id : 6306801377973 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Match the environmental factors (Column-I) with their roles in cost-benefit analysis (Column-II).

Column-I	Column-II
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1. Air quality	A. Reduces resource depletion
2. Water conservation	B. Improves public health
3. Land resources	C. Affects agricultural yield
4. Energy use	D. Enhances sustainability

Options :

- ✘ 1-A, 2-B, 3-C, 4-D
- ✘ 1-A, 2-D, 3-C, 4-B
- ✔ 1-B, 2-D, 3-C, 4-A
- ✘ 1-D, 2-A, 3-B, 4-A

Question Number : 22 Question Id : 6306801399353 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Match the column A for the components of food web with their characteristics in column B.

Column A (Components of food web)	Column B (characteristics)
1. Apex predator	a. Breaks down dead organic matter
2. Keystone species	b. Energy harnessing
3. Decomposer	c. Maintains ecosystem structure and function
4. Primary producer	d. Regulates population sizes of other species

Options :

- ✔ 1-d; 2-c; 3-a; 4-b
- ✘ 1-c; 2-d; 3-b; 4-a
- ✘ 1-b; 2-d; 3-a; 4-c
- ✘ 1-a; 2-d; 3-b; 4-c

Question Number : 23 Question Id : 6306801244555 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following is the most significant example of a keystone species in a food chain?

Options :

- ✔ Apex predator
- ✘ Decomposer
- ✘ Producer
- ✘ Mesopredator

Question Number : 24 Question Id : 6306801377291 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

How does the depletion of soil nutrients directly affect global food security?

Options :

- ✔ It reduces the carrying capacity of soil for crops.
- ✘ It enhances the growth of invasive species.
- ✘ It increases water availability in agricultural regions.
- ✘ It promotes biodiversity in farmland ecosystems.

Question Number : 25 Question Id : 6306801377306 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Read the given statement and conclusions carefully. Assuming that the information given in the statement is true, decide which of the given conclusion(s) logically follow(s) from the statement.

Statement: Soil microbes are critical for nutrient cycling but are highly sensitive to chemical inputs in agriculture.

Conclusions:

- I: Reducing chemical fertilisers can enhance microbial health in soils.
 II: Without soil microbes, nutrient cycling is halted, leading to soil infertility.

Options :

- ✘ Only Conclusion I follows.
- ✘ Only Conclusion II follows.
- ✔ Both Conclusions I and II follow.
- ✘ Neither Conclusion I nor II follows.

Question Number : 26 Question Id : 6306801289228 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the primary reason for decreased soil fertility in intensive farming areas?

Options :

- ✘ Disruption of mycorrhizal associations
- ✘ Increased soil compaction
- ✔ Loss of organic matter
- ✘ Change in soil pH

Question Number : 27 Question Id : 6306801377509 Question Type : MCQ Option Shuffling : Yes
Correct Marks : 2 Wrong Marks : 0.66

Select the option that is correct regarding the following two statements labelled Assertion (A) and Reason (R).

Assertion (A): Eco-friendly agricultural programs reduce greenhouse gas emissions.

Reason (R): Such programs minimise the dependency on synthetic fertilisers and promote carbon sequestration.

Options :

1. ✓ Both A and R are true, and R is the correct explanation of A.
2. ✗ Both A and R are true, but R is not the correct explanation of A.
3. ✗ A is true, but R is false.
4. ✗ A is false, but R is true.

Question Number : 28 Question Id : 6306801244350 Question Type : MCQ Option Shuffling : Yes
Correct Marks : 2 Wrong Marks : 0.66

Which of the following is a characteristic of a mature ecosystem?

Options :

1. ✓ High species diversity
2. ✗ Absence of keystone species
3. ✗ Simple food web
4. ✗ Primary succession

Question Number : 29 Question Id : 6306801244470 Question Type : MCQ Option Shuffling : Yes
Correct Marks : 2 Wrong Marks : 0.66

Which of the following ecosystem functions is most closely related to the concept of 'tipping points', where small changes can lead to abrupt and irreversible changes in ecosystem behaviour?

Options :

1. ✗ Non-linear dynamics
2. ✗ Catastrophic shifts
3. ✓ Threshold effects
4. ✗ Feedback loops

Question Number : 30 Question Id : 6306801286194 Question Type : MCQ Option Shuffling : Yes
Correct Marks : 2 Wrong Marks : 0.66

Which land use pattern is considered most sustainable for a developing urban periphery?

Options :

1. ✗ High-density residential development with integrated green spaces
2. ✗ Single-use commercial zones with extensive parking
3. ✓ Scattered low-density housing developments
4. ✗ Industrial parks without buffer zones

Question Number : 31 Question Id : 6306801286205 Question Type : MCQ Option Shuffling : Yes
Correct Marks : 2 Wrong Marks : 0.66

Given below are an Assertion (A) and a Reason (R). Carefully analyse the two statements and select the correct option.

Assertion (A): India's land use policy prioritises agricultural land preservation.

Reason (R): Food security is considered a national priority in environmental planning.

Options :

1. ✓ Assertion and reason are both true, and reason explains the assertion.
2. ✗ Assertion and reason are both true, but reason does not explain the assertion.
3. ✗ Assertion is true but reason is false.
4. ✗ Both assertion and reason are false.

Question Number : 32 Question Id : 6306801377268 Question Type : MCQ Option Shuffling : Yes
Correct Marks : 2 Wrong Marks : 0.66

Which of the following is a limitation of the 'Limits to Growth' model?

Options :

1. ✓ Lack of inclusion of technology's role in resource management
2. ✗ Overestimation of renewable resources
3. ✗ Focus only on rural ecosystems
4. ✗ Ignoring economic factors like GDP growth

Question Number : 33 Question Id : 6306801244656 Question Type : MCQ Option Shuffling : Yes
Correct Marks : 2 Wrong Marks : 0.66

Which of the following ecosystems exhibits highest net primary production?

Options :

1. ✗ Temperate grassland

2. ✘ Arctic tundra
3. ✔ Tropical rainforest
4. ✘ Coral reef

Question Number : 34 Question Id : 6306801377112 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following is a primary objective of urban planning in India?

Options :

1. ✘ Enhancing biodiversity in forests
2. ✘ Reducing air pollution in rural areas
3. ✔ Managing land use for sustainable development
4. ✘ Promoting industrial growth without restrictions

Question Number : 35 Question Id : 6306801377967 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Read the given statement and conclusions carefully. Assuming that the information given in the statement is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusion(s) logically follow(s) from the statement.

Statement: Urbanisation affects land use patterns.

Conclusions:

I: Urban expansion reduces agricultural land.

II: Land use changes have no impact on biodiversity.

Options :

1. ✔ Only Conclusion I follows.
2. ✘ Only Conclusion II follows.
3. ✘ Both Conclusions I and II follows.
4. ✘ Neither Conclusion I nor II follows.

Question Number : 36 Question Id : 6306801377979 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Match the soil components (Column-I) with their ecological functions (Column-II).

Column-I	Column-II
1. Organic matter	A. Enhances plant growth
2. Microbes	B. Retains nutrients
3. Minerals	C. Decomposes waste
4. Water	D. Regulates moisture

Options :

1. ✘ 1-C, 2-B, 3-A, 4-D
2. ✘ 1-B, 2-A, 3-C, 4-D
3. ✘ 1-D, 2-C, 3-A, 4-B
4. ✔ 1-B, 2-C, 3-A, 4-D

Question Number : 37 Question Id : 6306801244319 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Select the correct conclusion for the following statement.

Statement: Decomposers play a crucial role in nutrient cycling in an ecosystem.

Options :

1. ✘ Decomposers are the primary consumers of an ecosystem
2. ✘ Nutrient cycling is unnecessary for ecosystem function
3. ✘ Decomposers compete with producers for resources
4. ✔ Decomposers facilitate nutrient availability for producers

Question Number : 38 Question Id : 6306801244664 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following options is an appropriate conclusion for the given statement with reference to ecosystem energetics?

Statement: The second law of thermodynamics deals with changes in total entropy.

Options :

1. ✘ Energy is effectively created in ecosystems through photosynthesis
2. ✘ Energy is dissipated as heat in ecosystems, but entropy decreases
3. ✔ Energy is conserved in ecosystems, but entropy increases
4. ✘ Energy is transferred efficiently between trophic levels without loss

Question Number : 39 Question Id : 6306801286554 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Match the planning concepts with their primary objectives.

Planning Concepts

1. Green Belt
2. Mixed Land Use
3. Transit Oriented Development
4. Agricultural Zoning

Objectives

- a) Reducing vehicle dependency
- b) Limiting urban sprawl
- c) Preserving farming activities
- d) Enhancing community vibrancy

Options :

1. ✖ 1-a, 2-c, 3-b, 4-d
2. ✖ 1-c, 2-a, 3-d, 4-b
3. ✔ 1-b, 2-d, 3-a, 4-c
4. ✖ 1-d, 2-b, 3-c, 4-a

Question Number : 40 Question Id : 6306801377287 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What role do soil microbes play in maintaining soil health?

Options :

1. ✖ Decreasing soil porosity
2. ✔ Facilitating nutrient cycling and decomposition
3. ✖ Promoting waterlogging
4. ✖ Reducing biodiversity in the soil ecosystem

Question Number : 41 Question Id : 6306801291919 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

In the context of global biogeochemical cycles, which of the following processes represents the most complex and least understood nutrient transformation mechanism?

Options :

1. ✔ Nitrogen fixation by symbiotic bacteria
2. ✖ Phosphorus weathering and sedimentation
3. ✖ Microbial mediated sulphur reduction in anaerobic environments
4. ✖ Mercury biomagnification in aquatic ecosystems

Question Number : 42 Question Id : 6306801292013 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following is a primary characteristic of successful eco-friendly programmes in India?

Options :

1. ✖ Maximising economic growth at any environmental cost
2. ✔ Community participation and local ecosystem understanding
3. ✖ Exclusive government-led initiatives without stakeholder involvement
4. ✖ Focusing solely on urban environmental challenges

Question Number : 43 Question Id : 6306801292049 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

This question consists of a statement, followed by a conclusion. You are required to determine whether or not the given conclusion logically follows from the statement.

Statement: Soil profile consists of distinct layers, each with unique characteristics.

Conclusion: Each layer plays a specific role in soil fertility and ecological balance.

Options :

1. ✖ Only statement is true.
2. ✖ Only conclusion is true.
3. ✔ Both statement and conclusion are true.
4. ✖ Neither statement nor conclusion is true.

Question Number : 44 Question Id : 6306801292182 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Match the following pollutants with their primary effects on the environment.

Pollutants

- A) Particulate matter
- B) Heavy metals
- C) Eutrophication agents
- D) Persistent Organic Pollutants (POPs)

Effects

- 1) Respiratory issues in humans
- 2) Bioaccumulation and toxicity
- 3) Algal blooms and oxygen depletion
- 4) Long-term contamination of ecosystems

Options :

1. ✘ A-4, B-3, C-2, D-1
2. ✘ A-2, B-1, C-4, D-3
3. ✔ A-1, B-2, C-3, D-4
4. ✘ A-3, B-4, C-1, D-2

Question Number : 45 Question Id : 6306801292201 Question Type : MCQ Option Shuffling : Yes Correct Marks : 2 Wrong Marks : 0.66

Statement: Excessive use of chemical fertilisers can lead to soil degradation.

Which of the following conclusions best reflects/supports this statement?

Options :

1. ✘ Soil health improves with chemical fertiliser application.
2. ✔ Chemical fertilisers cause acidification, reducing soil fertility.
3. ✘ Chemical fertilisers promote biodiversity in the soil ecosystem.
4. ✘ Soil properties remain unchanged despite continuous fertiliser use.

Question Number : 46 Question Id : 6306801377547 Question Type : MCQ Option Shuffling : Yes Correct Marks : 2 Wrong Marks : 0.66

How do plastic pollutants affect marine ecosystems?

Options :

1. ✘ They enhance coral reef growth.
2. ✘ They increase oxygen levels in water.
3. ✔ They disrupt food chains and harm aquatic organisms.
4. ✘ They promote the growth of beneficial algae.

Question Number : 47 Question Id : 6306801377556 Question Type : MCQ Option Shuffling : Yes Correct Marks : 2 Wrong Marks : 0.66

What is a major consequence of heavy metal contamination in soil?

Options :

1. ✘ Increased crop yield
2. ✘ Enhanced microbial activity
3. ✔ Reduced soil fertility and toxicity to plants
4. ✘ Promotion of water infiltration

Question Number : 48 Question Id : 6306801289233 Question Type : MCQ Option Shuffling : Yes Correct Marks : 2 Wrong Marks : 0.66

Which emerging contaminant poses the greatest threat to aquatic ecosystems due to its endocrine-disrupting properties?

Options :

1. ✘ Microplastics
2. ✘ Pharmaceutical residues
3. ✔ Perfluoroalkyl Substances (PFAS)
4. ✘ Nanomaterials

Question Number : 49 Question Id : 6306801292213 Question Type : MCQ Option Shuffling : Yes Correct Marks : 2 Wrong Marks : 0.66

Statement: Biological treatment processes are essential for effective wastewater treatment.

Which of the following conclusions best supports the given statement?

Options :

1. ✘ Biological treatment removes physical debris from water.
2. ✔ It relies on microorganisms to degrade organic pollutants.
3. ✘ Biological processes are ineffective for nutrient removal.
4. ✘ Advanced oxidation is the primary biological treatment method.

Question Number : 50 Question Id : 6306801377584 Question Type : MCQ Option Shuffling : Yes Correct Marks : 2 Wrong Marks : 0.66

How does acid rain primarily affect plant ecosystems?

Options :

1. ✘ It increases chlorophyll production.
2. ✔ It lowers soil pH, affecting nutrient availability.
3. ✘ It enhances root growth and water absorption.
4. ✘ It promotes rapid decomposition of organic matter.

Question Number : 51 Question Id : 6306801377597 Question Type : MCQ Option Shuffling : Yes Correct Marks : 2 Wrong Marks : 0.66

Read the given statement and conclusions carefully. Assuming that the information given in the statement is true, decide which of the given conclusion(s) logically follow(s) from the statement.

Statement: Carbon monoxide (CO) is a dangerous air pollutant.

Conclusions:

I: CO binds with haemoglobin in the blood, reducing oxygen transport.

II: CO emissions are primarily from natural sources like volcanoes.

Options :

1. ✓ Only Conclusion I follows.
2. ✗ Only Conclusion II follows.
3. ✗ Both Conclusions I and II follow.
4. ✗ Neither Conclusion I nor II follows.

Question Number : 52 Question Id : 6306801377611 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Match the water pollutants (Column-I) with their primary sources (Column-II).

Column-I	Column-II
1. Nitrates	A. Industrial discharge
2. Mercury	B. Agricultural runoff
3. Oil and grease	C. Marine shipping
4. Plastic debris	D. Improper waste disposal

Options :

1. ✗ 1-A, 2-D, 3-C, 4-B
2. ✗ 1-B, 2-C, 3-A, 4-D
3. ✓ 1-B, 2-A, 3-C, 4-D
4. ✗ 1-C, 2-A, 3-B, 4-D

Question Number : 53 Question Id : 6306801289238 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which radioactive isotope presents the greatest concern in nuclear power plant emissions?

Options :

1. ✗ Cesium-137
2. ✗ Iodine-131
3. ✓ Strontium-90
4. ✗ Tritium

Question Number : 54 Question Id : 6306801377662 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Read the given statement and conclusions carefully. Assuming that the information given in the statement is true, decide which of the given conclusion(s) logically follow(s) from the statement.

Statement: Nuclear accidents are the leading cause of radiation pollution.

Conclusions:

I: All radiation pollution stems from human activities.

II: Radiation from natural sources like radon gas also contributes to pollution.

Options :

1. ✗ Only Conclusion I follows.
2. ✓ Only Conclusion II follows.
3. ✗ Both Conclusions I and II follow.
4. ✗ Neither Conclusions I nor II follows.

Question Number : 55 Question Id : 6306801245393 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the term for the process by which excess nutrients enter water bodies?

Options :

1. ✓ Eutrophication
2. ✗ Sedimentation
3. ✗ Acidification
4. ✗ Nutrient cycling

Question Number : 56 Question Id : 6306801246093 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the primary mechanism of arsenic mobilisation from Fe-oxide in groundwater, leading to its increased concentration?

Options :

1. ✗ Oxidative dissolution
2. ✓ Reductive dissolution

3. ✘ Complexation
4. ✘ Chelation

Question Number : 57 Question Id : 6306801289245 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which compound is used as the catalyst in COD determination?

Options :

1. ✔ Silver sulphate
2. ✘ Mercuric sulphate
3. ✘ Copper sulphate
4. ✘ Zinc sulphate

Question Number : 58 Question Id : 6306801292262 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What does Dissolved Oxygen (DO) in water indicate?

Options :

1. ✘ Level of microbial contamination
2. ✔ Availability of oxygen for aquatic organisms
3. ✘ Presence of heavy metals in water
4. ✘ Alkalinity of water

Question Number : 59 Question Id : 6306801246090 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following is a significant source of water pollution due to the release of heavy metals?

Options :

1. ✘ Agricultural activity
2. ✔ Smelting and refining in mining
3. ✘ Dam functioning
4. ✘ Urban effluent system

Question Number : 60 Question Id : 6306801248849 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following options is the appropriate conclusion to the below mentioned statement?

The toxicity of heavy metals can be reduced through chemical treatment.

Options :

1. ✘ Chemical treatment derivatises and reduces heavy metal toxicity.
2. ✘ Chemical treatment can immobilise heavy metals in soil and water
3. ✘ Heavy metals cannot be removed from the environment
4. ✔ Chemical treatment volatalises heavy metals

Question Number : 61 Question Id : 6306801289256 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

This question consists of a statement, followed by a conclusion. You are required to determine whether or not the given conclusion logically follows from the statement.

Statement: 4-Aminoantipyrine method is used for phenol determination.

Conclusion: The method can detect all phenolic compounds equally.

Options :

1. ✔ Statement is true, conclusion is false
2. ✘ Both statement and conclusion are false
3. ✘ Statement is false, conclusion is true
4. ✘ Both statement and conclusion are true but are not related

Question Number : 62 Question Id : 6306801292319 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which method is primarily used to determine the hardness of water?

Options :

1. ✘ Gravimetric analysis
2. ✔ EDTA titration
3. ✘ Spectrophotometry
4. ✘ Atomic absorption spectroscopy

Question Number : 63 Question Id : 6306801377811 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Why are high phosphate levels in water bodies a concern?

Options :

1. ✘ Because they promote the growth of pathogenic bacteria
2. ✔ Because they lead to eutrophication and algal blooms
3. ✘ Because they increase the water's salinity
4. ✘ Because they enhance the water's oxygen-carrying capacity

Question Number : 64 Question Id : 6306801377985 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Select the option that is correct regarding the following two statements labelled Assertion (A) and Reason (R).

Assertion (A): Oil-spills severely affect aquatic life.

Reason (R): Oil reduces oxygen availability in water.

Options :

1. ✔ Both A and R are true, and R is the correct explanation of A.
2. ✘ Both A and R are true, but R is not the correct explanation of A.
3. ✘ A is true, but R is false.
4. ✘ A is false, but R is true.

Question Number : 65 Question Id : 6306801246091 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the primary mechanism of mercury methylation in aquatic environments, leading to the formation of methylmercury?

Options :

1. ✘ Abiotic methylation through interaction with sediments
2. ✔ Biotic methylation through interaction with sulphate-reducing bacteria
3. ✘ Photolytic methylation through interaction with sunlight
4. ✘ Hydrolytic methylation through interaction with water molecules

Question Number : 66 Question Id : 6306801248799 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following groundwater chemical processes is responsible for the formation of hard water?

Options :

1. ✔ Calcite dissolution
2. ✘ Halite dissolution
3. ✘ Fluoride dissolution
4. ✘ Silicate dissolution

Question Number : 67 Question Id : 6306801289244 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the primary interference in Winkler's method for Dissolved Oxygen (DO) determination?

Options :

1. ✔ Nitrite presence
2. ✘ High turbidity
3. ✘ Dissolved iron
4. ✘ Organic matter

Question Number : 68 Question Id : 6306801377952 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the primary impact of heavy metal contamination on aquatic ecosystems?

Options :

1. ✘ Enhanced microbial activity
2. ✔ Biomagnification in the food chain
3. ✘ Improved water clarity
4. ✘ Increased oxygen levels

Question Number : 69 Question Id : 6306801248810 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following options is an appropriate conclusion for the following statement?

The concentration of nitrates in groundwater has increased due to excessive use of fertilisers

Options :

1. ✘ The groundwater is safe for human consumption.
2. ✔ The groundwater is not safe for human consumption.
3. ✘ The concentration of nitrates will have no impact on human health.
4. ✘ The concentration of nitrates will only affect aquatic life.

Question Number : 70 Question Id : 6306801377774 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the significance of measuring total suspended solids (TSS) in water?

Options :

- ✘ It indicates microbial activity in water.
- ✘ It measures organic matter decomposition.
- ✔ It assesses clarity and sediment load.
- ✘ It determines water temperature.

Question Number : 71 Question Id : 6306801248664 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following is a method for controlling eutrophication?

Options :

- ✘ Adding nutrients to the water
- ✘ Introducing invasive species
- ✔ Reducing nutrient runoff from agricultural fields
- ✘ Increasing water circulation

Question Number : 72 Question Id : 6306801377826 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Read the given statement and conclusions carefully. Assuming that the information given in the statement is true, decide which of the given conclusion(s) logically follow(s) from the statement.

Statement: High levels of fluoride in drinking water can have adverse health effects.

Conclusions:

I: Excessive fluoride intake causes dental fluorosis.

II: Fluoride contamination in water is always due to human activities.

Options :

- ✔ Only Conclusion I follows.
- ✘ Only Conclusion II follows.
- ✘ Both Conclusions I and II follow.
- ✘ Neither Conclusion I nor II follows.

Question Number : 73 Question Id : 6306801377784 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Read the given statement and conclusions carefully. Assuming that the information given in the statement is true, decide which of the given conclusion(s) logically follow(s) from the statement.

Statement: Water discoloration can indicate contamination by organic or inorganic substances.

Conclusions:

I: Greenish water always suggests the presence of algae.

II: Dark brown water indicates high levels of iron or organic pollutants.

Options :

- ✘ Only Conclusion I follows.
- ✔ Only Conclusion II follows.
- ✘ Both Conclusions I and II follow.
- ✘ Neither Conclusion I nor II follows.

Question Number : 74 Question Id : 6306801377805 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

How is turbidity commonly measured in water samples?

Options :

- ✘ Using a colorimeter
- ✔ Using a Nephelometer
- ✘ By evaporation and residue analysis
- ✘ By measuring pH

Question Number : 75 Question Id : 6306801399357 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Match the column A (types of water pollutants) and their characters in column B.

Column A (Types of water pollutants)	Column B (Characteristics)
1. Heavy metals	a. Eutrophication and harmful algal blooms
2. Pesticides	b. Bioaccumulation and biomagnification
3. Nutrient pollutants	c. Groundwater contamination and soil pollution
4. Volatile organic compounds (VOCs)	d. Aquatic toxicity and habitat destruction

Options :

1. ✓ 1-b; 2-d; 3-a; 4-c
2. ✗ 1-b; 2-d; 3-c; 4-a
3. ✗ 1-d; 2-c; 3-a; 4-b
4. ✗ 1-b; 2-a; 3-d; 4-c

Question Number : 76 Question Id : 6306801241479 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which method is used for analysing fluoride concentration in air samples?

Options :

1. ✗ X-ray diffraction
2. ✓ Ion-selective electrode
3. ✗ UV-visible spectroscopy
4. ✗ Gas chromatography

Question Number : 77 Question Id : 6306801241619 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following pollutants is primarily formed due to incomplete combustion in vehicle engines?

Options :

1. ✗ Nitrogen oxides (NO_x)
2. ✓ Carbon monoxide (CO)
3. ✗ Hydrocarbons (HCs)
4. ✗ Particulate matter (PM)

Question Number : 78 Question Id : 6306801241634 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What does the Ringelmann Smoke Chart help to determine in relation to emissions?

Options :

1. ✗ The speed of smoke rising
2. ✗ The colour of smoke
3. ✓ The density of smoke
4. ✗ The temperature of smoke

Question Number : 79 Question Id : 6306801241685 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Match the following.

Type of Pollutant	Source of Pollutant
A. Biological Pollutants	1. Cigarette Smoke
B. Chemical Pollutants	2. Air Fresheners
C. Particulate Pollutants	3. Wood Stoves
D. Combustion Products	4. Mold and Dust
E. Volatile Organic Compounds (VOCs)	5. Cleaning Products

Options :

1. ✓ A - 4; B - 5; C - 1; D - 3; E - 2
2. ✗ A - 4; B - 1; C - 3; D - 2; E - 5
3. ✗ A - 3; B - 2; C - 4; D - 1; E - 5
4. ✗ A - 2; B - 4; C - 1; D - 3; E - 5

Question Number : 80 Question Id : 6306801241519 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Read the given statement and conclusions carefully. Without making any assumptions, decide which of the given conclusions logically follow(s) from the statements.

Statement:

In a venturi scrubber, the reduced-pressure region helps cool the exhaust gas and facilitates the condensation of vapour from the liquid initially evaporated in the hot waste gas.

Conclusions:

- I. The cooling effect in a venturi scrubber contributes to better scrubbing efficiency.
- II. Condensation in a venturi scrubber reduces the scrubbing efficiency.

Options :

1. ✓ Only conclusion I follows.
2. ✗ Only conclusion II follows.
3. ✗ Neither conclusion I nor II follows.
4. ✗ Both conclusions I and II follow.

Question Number : 81 Question Id : 6306801241613 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which absorption technique is the most commonly used for the quantitative analysis of SO₂ in air?

Options :

- ✘ Gas chromatography
- ✔ UV-Vis spectroscopy
- ✘ Infrared spectroscopy
- ✘ Thermal conductivity detector

Question Number : 82 Question Id : 6306801241632 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following is a significant challenge in reducing particulate matter emissions from diesel vehicles despite the use of particulate filters?

Options :

- ✘ Increased use of gasoline as fuel
- ✔ High sulphur content in diesel fuel
- ✘ Lack of efficient combustion technology
- ✘ Increased engine wear due to cleaner fuels

Question Number : 83 Question Id : 6306801241652 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Select the option that is true regarding the following two statements labelled Assertion (A) and Reason (R).

Assertion (A): High volume sampling is an effective technique for collecting particulate matter in the atmosphere.

Reason (R): High volume samplers can filter large amounts of air, trapping particulate matter in the process, which is ideal for environmental studies.

Options :

- ✔ Both A and R are true, and R is the correct explanation of A.
- ✘ Both A and R are true, and R is not the correct explanation of A.
- ✘ A is true, but R is false.
- ✘ A is false, but R is true.

Question Number : 84 Question Id : 6306801241691 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Read the given statement and conclusions carefully. Without making any assumptions, decide which of the given conclusions logically follow(s) from the statements.

Statement:

Studies have shown that poor ventilation in homes, combined with indoor activities such as cooking with solid fuels or smoking, leads to the accumulation of respirable particulates in indoor air. This has been linked to a significant increase in respiratory health issues, especially in children.

Conclusions:

I. Improving ventilation in homes can help reduce the concentration of harmful particulates.

II. Children living in poorly ventilated homes are at higher risk of developing respiratory problems due to indoor air pollution.

Options :

- ✘ Only conclusion I follows.
- ✘ Only conclusion II follows.
- ✘ Neither conclusion I nor II follows.
- ✔ Both conclusion I and II follows.

Question Number : 85 Question Id : 6306801241700 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Select the option that is true regarding the following two statements labelled Assertion (A) and Reason (R).

Assertion (A): Proper design of building materials can help mitigate indoor air pollution.

Reason (R): Materials like low-VOC paints, non-toxic insulation and natural flooring can reduce the release of harmful substances indoors.

Options :

- ✔ Both A and R are true, and R is the correct explanation of A.
- ✘ Both A and R are true, and R is not the correct explanation of A.
- ✘ A is true, but R is false.
- ✘ A is false, but R is true.

Question Number : 86 Question Id : 6306801241510 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is one of the major issues when using impingers for particle analysis?

Options :

- ✘ They do not allow size segregation.
- ✔ They may cause the break-up of particles into smaller pieces.
- ✘ They do not collect enough large particles.
- ✘ They have a low retention efficiency.

Question Number : 87 Question Id : 6306801241627 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Read the given statement and conclusions carefully. Without making any assumptions, decide which of the given conclusions logically follow(s) from the statements.

Statement:

Emission monitoring systems rely on real-time sensor data to detect pollutant levels. However, false positives or inaccuracies may arise due to sensor malfunctions or interference from external factors.

Conclusions:

- I. Sensor accuracy is critical for the reliability of emission monitoring systems.
- II. Emission monitoring systems cannot detect pollutants if external factors interfere with sensor readings.

Options :

- 1. ✓ Only conclusion I follows.
- 2. ✗ Only conclusion II follows.
- 3. ✗ Neither conclusion I nor II follows.
- 4. ✗ Both conclusions I and II follow.

Question Number : 88 Question Id : 6306801241661 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Read the given statement and conclusions carefully. Without making any assumptions, decide which of the given conclusions logically follow(s) from the statements.

Statement:

The analysis of particulate matter in automobile emissions involves collecting samples using various devices like filter samplers and gravimetric techniques. These methods help quantify the mass and composition of the particulate matter, providing insights into the environmental impact of different types of vehicles.

Conclusions:

- I. Filter samplers and gravimetric techniques are essential for quantifying particulate matter from automobile emissions.
- II. The analysis of particulate matter has no significance in understanding the environmental impact of automobile emissions.

Options :

- 1. ✓ Only conclusion I follows.
- 2. ✗ Only conclusion II follows.
- 3. ✗ Neither conclusion I nor II follows.
- 4. ✗ Both conclusions I and II follow.

Question Number : 89 Question Id : 6306801241668 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the primary reason for high indoor air pollution levels when unprocessed solid fuels are used, even in well-ventilated spaces?

Options :

- 1. ✓ Poor combustion efficiency and high emission factors
- 2. ✗ Lack of awareness regarding the dangers of indoor pollution
- 3. ✗ Limited availability of alternative fuel sources
- 4. ✗ Inefficient cooking and heating systems

Question Number : 90 Question Id : 6306801248918 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the term for the process of analysing the environmental impacts of forest management practices?

Options :

- 1. ✓ Environmental impact assessment
- 2. ✗ Forest ecology
- 3. ✗ Ecological agronomy
- 4. ✗ Sustainable forest management

Question Number : 91 Question Id : 6306801248927 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the term for the process of urban decay and decline?

Options :

- 1. ✓ Urban blight
- 2. ✗ Urban renewal
- 3. ✗ Gentrification
- 4. ✗ Urbanisation

Question Number : 92 Question Id : 6306801249948 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the term for the process by which mining activities release heavy metals into the environment?

Options :

- 1. ✓ Leaching
- 2. ✗ Weathering
- 3. ✗ Erosion
- 4. ✗ Sedimentation

Question Number : 93 Question Id : 6306801292410 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following gases contributes most significantly to global warming?

Options :

- ✘ Oxygen (O₂)
- ✔ Carbon Dioxide (CO₂)
- ✘ Nitrogen (N₂)
- ✘ Argon (Ar)

Question Number : 94 Question Id : 6306801325804 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Read the given statement and conclusions carefully. Assuming that the information given in the statement is true, decide which of the given conclusion(s) is/are correct.

Statement: Climate change is causing shifts in species distributions, with many species moving toward the poles or higher elevations.

Conclusions:

- I. Species are unable to adapt to climate change and are facing extinction.
- II. Some species are adapting to climate change by relocating to more suitable habitats.

Options :

- ✘ Both Conclusions I and II are correct.
- ✔ Only Conclusion 2 is correct.
- ✘ Only Conclusion 1 is correct.
- ✘ Neither Conclusion I nor II is correct.

Question Number : 95 Question Id : 6306801249881 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following industrial processes is responsible for the largest share of particulate matter emissions?

Options :

- ✘ Steel production
- ✘ Pulp and paper production
- ✔ Mining and smelting
- ✘ Cement production

Question Number : 96 Question Id : 6306801292882 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following practices is most effective in restoring the global climate?

Options :

- ✘ Increasing industrial emissions
- ✔ Large-scale afforestation
- ✘ Expanding urban areas
- ✘ Utilising non-renewable energy sources

Question Number : 97 Question Id : 6306801378001 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Select the option that is correct regarding the following two statements labelled Assertion (A) and Reason (R).

Assertion (A): Ocean acidification leads to the extinction of certain marine species.

Reason (R): Acidification causes a complete depletion of oxygen in marine ecosystems.

Options :

- ✘ Both A and R are true, and R is the correct explanation of A.
- ✘ Both A and R are true, but R is not the correct explanation of A.
- ✔ A is true, but R is false.
- ✘ A is false, but R is true.

Question Number : 98 Question Id : 6306801378163 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which parameter is commonly measured in aquatic environmental assessments?

Options :

- ✘ Air particulate matter
- ✔ Dissolved oxygen
- ✘ Noise levels
- ✘ Soil pH

Question Number : 99 Question Id : 6306801399582 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Match the column A for types of industrialisation with column B for its social impact.

Column A (Types of industrialisation)	Column B (Social Impact)
---------------------------------------	--------------------------

1. Capital-Intensive Industry	a. Increased opportunities for entrepreneurship and innovation
2. Labor-Intensive Industry	b. Increased demand for skilled labour and education
3. High-Tech Industry	c. Job creation and economic growth in rural areas
4. Creative Industry	d. Increased income inequality and social stratification

Options :

1. ✖ 1-b; 2-a; 3-c; 4-d
2. ✖ 1-d; 2-a; 3-c; 4-b
3. ✔ 1-d; 2-c; 3-b; 4-a
4. ✖ 1-c; 2-b; 3-a; 4-d

Question Number : 100 Question Id : 6306801248932 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the term for the process of urban planning that prioritises community engagement?

Options :

1. ✖ Collaborative planning
2. ✔ Participatory planning
3. ✖ Inclusive planning
4. ✖ Sustainable planning

Question Number : 101 Question Id : 6306801292915 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following tools is commonly used to assess visual impacts in Environmental Impact Assessments (EIA)?

Options :

1. ✔ Geographic Information Systems (GIS)
2. ✖ Noise level meters
3. ✖ Water quality testing kits
4. ✖ Soil pH meters

Question Number : 102 Question Id : 6306801378096 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Read the given statement and conclusions carefully. Assuming that the information given in the statement is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusion(s) logically follow(s) from the statements.

Statement: Public participation is an essential component of environmental decision-making.

Conclusions:

I: It ensures transparency and accountability in environmental projects.

II: Public involvement is mandatory for all environmental assessments globally.

Options :

1. ✔ Only conclusion I follows.
2. ✖ Only conclusion II follows.
3. ✖ Both conclusions I and II follow.
4. ✖ Neither conclusion I nor II follows.

Question Number : 103 Question Id : 6306801378108 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Match the key indicators of aquatic assessment (Column-I) with their associated impacts (Column-II).

Column-I	Column-II
1. pH levels	A. Affects survival of aquatic organisms
2. Dissolved oxygen (DO)	B. Measures water body's ability to support life
3. Turbidity	C. Determines sediment and pollutant load
4. Heavy metal presence	D. Indicates toxic contamination

Options :

1. ✖ 1-B, 2-A, 3-D, 4-C
2. ✔ 1-A, 2-B, 3-C, 4-D
3. ✖ 1-D, 2-C, 3-B, 4-A
4. ✖ 1-C, 2-D, 3-A, 4-B

Question Number : 104 Question Id : 6306801248886 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following is an example of an indirect driver of environmental change?

Options :

1. ✖ Global warming
2. ✖ Pollution increase
3. ✖ Climate change
4. ✔ Economic inequality

Question Number : 105 Question Id : 6306801289278 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which ecosystem shows the earliest detectable response to climate change?

Options :

1. Alpine tundra
2. Coral reefs
3. Temperate forests
4. Grasslands

Question Number : 106 Question Id : 6306801291066 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which statistical method best accounts for detection probability in animal population estimates?

Options :

1. Simple random sampling
2. Mark-recapture
3. Distance sampling
4. Stratified sampling

Question Number : 107 Question Id : 6306801377964 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which gas is the primary cause of acid rain?

Options :

1. Carbon monoxide
2. Sulphur dioxide
3. Methane
4. Ozone

Question Number : 108 Question Id : 6306801248907 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following is the most prominent consequence of urbanisation on land use?

Options :

1. Increased green spaces
2. Decreased impervious surfaces
3. Reduced urban heat island effect
4. Increased land fragmentation

Question Number : 109 Question Id : 6306801248921 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the term for the process of certifying sustainably harvested forest products?

Options :

1. Forest certification
2. Chain of custody
3. Eco-labeling
4. Sustainable forest management

Question Number : 110 Question Id : 6306801250019 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the primary purpose of a stilling basin in a dam?

Options :

1. To reduce the pressure on the dam
2. To increase the water level upstream
3. To dissipate the kinetic energy of the water
4. To improve the water quality downstream

Question Number : 111 Question Id : 6306801289281 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

This question consists of an Assertion (A) and a Reason (R). Carefully analyse the two statements and select the correct option.

(A): Arctic ice restoration is considered a critical climate intervention strategy.

(R): Arctic ice loss accelerates global warming through positive feedback loops.

Options :

1. A is correct but R is incorrect.
2. Both A and R are correct but R does not explain A.
3. Both A and R are correct, and R explains A.

4. ✖ Both A and R are incorrect.

Question Number : 112 Question Id : 6306801291129 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the most effective stage for incorporating public participation in EIA?

Options :

1. ✖ Post-project monitoring
2. ✖ Impact prediction
3. ✖ Mitigation planning
4. ✔ Scoping phase

Question Number : 113 Question Id : 6306801377989 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following is a direct consequence of ocean acidification?

Options :

1. ✖ Increased oxygen content in oceans
2. ✔ Coral bleaching and reduced calcium carbonate availability
3. ✖ Enhanced growth of phytoplankton
4. ✖ Increased salinity in oceans

Question Number : 114 Question Id : 6306801377997 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Match the impacts of climate change (Column-I) with their corresponding effects (Column-II).

Column-I	Column-II
1. Melting glaciers	A. Rise in sea levels
2. Extreme weather	B. Increased frequency of storms
3. Ocean warming	C. Coral bleaching
4. Deforestation	D. Loss of biodiversity

Options :

1. ✔ 1-A, 2-B, 3-C, 4-D
2. ✖ 1-B, 2-C, 3-A, 4-D
3. ✖ 1-A, 2-D, 3-B, 4-C
4. ✖ 1-C, 2-A, 3-D, 4-B

Question Number : 115 Question Id : 6306801378087 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which aspect is typically assessed in a plant survey conducted during an EIA?

Options :

1. ✖ Socioeconomic benefits of local flora
2. ✖ The medicinal value of plants in the area
3. ✔ Species composition and vulnerability to project activities
4. ✖ Carbon content in deforested areas

Question Number : 116 Question Id : 6306801378147 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which factor is typically considered in the economic environment assessment of an EIA?

Options :

1. ✖ Impact of project activities on global stock markets
2. ✔ Resource dependency and income generation for local communities
3. ✖ Technological advancements introduced by the project
4. ✖ Long-term inflation trends

Question Number : 117 Question Id : 6306801292896 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Increasing greenhouse gas emissions directly lead to rising global temperatures.

Which of the following conclusions best reflects/supports this statement?

Options :

1. ✖ Greenhouse gases have no role in temperature regulation.
2. ✔ Reducing greenhouse gases will stabilise global temperatures.
3. ✖ Greenhouse gases only affect polar regions.
4. ✖ Emissions do not impact the climate globally.

Question Number : 118 Question Id : 6306801378077 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the primary objective of physical environment assessment in an EIA (Environmental Impact Assessment)?

Options :

- ✘ Assessing biodiversity conservation strategies
- ✔ Measuring the impact of human activities on soil, air, and water
- ✘ Determining economic costs of environmental policies
- ✘ Analysing the political aspects of environmental decisions

Question Number : 119 Question Id : 6306801378159 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the primary purpose of aquatic environmental impact assessment?

Options :

- ✘ To improve air quality
- ✔ To assess water pollution levels
- ✘ To reduce noise pollution
- ✘ To monitor soil erosion

Question Number : 120 Question Id : 6306801399567 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Match the column A (types of urbanization) with column B (environmental impacts).

Column A (Types of urbanization)	Column B (Environmental Impact)
1. Urban Sprawl	a. Improved air quality and reduced traffic congestion
2. Compact City	b. Displacement of low-income communities and increased social inequality
3. Gentrification	c. Reduced energy consumption and increased green spaces
4. Urban Renewal	d. Increased energy consumption and greenhouse gas emissions

Options :

- ✔ 1-d; 2-c; 3-b; 4-a
- ✘ 1-d; 2-b; 3-a; 4-c
- ✘ 1-c; 2-d; 3-b; 4-a
- ✘ 1-b; 2-c; 3-a; 4-d

Question Number : 121 Question Id : 6306801289267 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What catalytic species is most effective in stratospheric ozone destruction?

Options :

- ✘ Nitrogen dioxide
- ✔ Chlorine monoxide
- ✘ Hydroxyl radical
- ✘ Bromine monoxide

Question Number : 122 Question Id : 6306801292902 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

This question consists of an Assertion (A) and a Reason (R). Carefully analyse the two statements and select the correct option.

(A): Acid rain damages aquatic ecosystems and buildings.

(R): Acid rain is primarily caused by the deposition of sulphur dioxide (SO₂) and nitrogen oxides (NO_x).

Options :

- ✔ Both A and R are true, and R is the correct explanation of A.
- ✘ Both A and R are true, but R is not the correct explanation of A.
- ✘ A is true, but R is false.
- ✘ A is false, and R is true.

Question Number : 123 Question Id : 6306801377960 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which chemical group is primarily responsible for the depletion of the ozone layer?

Options :

- ✔ Chlorofluorocarbons (CFCs)
- ✘ Carbon dioxide
- ✘ Methane
- ✘ Nitrogen oxides

Question Number : 124 Question Id : 6306801378136 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Match the steps in plant survey methodology (Column-I) with their description (Column-II).

Column-I	Column-II
1. Site reconnaissance	A. Preliminary survey of the project site

2. Species documentation	B. Cataloguing plant species and locations
3. Habitat assessment	C. Analysing ecosystem structure and roles
4. Data analysis	D. Deriving insights from collected data

Options :

1. ✓ 1-A, 2-B, 3-C, 4-D
2. ✗ 1-D, 2-A, 3-B, 4-C
3. ✗ 1-C, 2-D, 3-A, 4-B
4. ✗ 1-B, 2-C, 3-D, 4-A

Question Number : 125 Question Id : 6306801378169 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the primary driver of global climate change?

Options :

1. ✗ Volcanic eruptions
2. ✓ Greenhouse gases
3. ✗ Ocean currents
4. ✗ Solar flares

Question Number : 126 Question Id : 6306801249898 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the term for the process by which industrial activities alter the global water cycle?

Options :

1. ✗ Evapotranspiration
2. ✗ Precipitation
3. ✗ Urban hydrology
4. ✓ Hydrologic change

Question Number : 127 Question Id : 6306801250050 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following types of turbines is most suitable for a low-head dam?

Options :

1. ✗ Impulse turbine
2. ✓ Reaction turbine
3. ✗ Kaplan turbine
4. ✗ Francis turbine

Question Number : 128 Question Id : 6306801291136 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which technique is most effective for evaluating landscape character changes?

Options :

1. ✗ Zone of visual influence mapping
2. ✗ Photomontage analysis
3. ✓ Geographic information system overlay
4. ✗ Viewshed analysis

Question Number : 129 Question Id : 6306801292911 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Match the following sources with their role in ozone depletion.

Source

- A) CFCs
- B) Halons
- C) Nitrous oxide (N₂O)
- D) Carbon tetrachloride

Effect

- 1) Release(s) bromine atoms affecting ozone
- 2) Destroy(s) ozone molecules in the stratosphere
- 3) Persistent ozone-depleting chemical
- 4) Contributes to ozone thinning

Options :

1. ✗ A-1, B-2, C-3, D-4
2. ✗ A-3, B-4, C-1, D-2
3. ✓ A-2, B-1, C-4, D-3
4. ✗ A-4, B-3, C-2, D-1

Question Number : 130 Question Id : 6306801241717 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following best describes the focus of ecotoxicology?

Options :

- Toxicity effects on individual organisms
- Industrial and human health toxicology
- Toxicity effects on natural ecosystems and nontarget species
- Toxicology related to domestic animals and agricultural crops

Question Number : 131 Question Id : 6306801250865 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the term for the process by which the body converts a toxic substance into a less toxic form?

Options :

- Biotransformation
- Bioaccumulation
- Biodegradation
- Bioconcentration

Question Number : 132 Question Id : 6306801241722 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Match the following regarding Environmental Toxicology - Toxicity (LD50 and LC50).

Toxicity Parameter	Description
A. LD50	1. The lethal concentration of a substance in the air or water that causes death i
B. LC50	2. The amount of a substance that will cause death in 50% of a group of organis
C. Acute Toxicity	3. The concentration of a toxic substance that results in a significant adverse eff
D. Chronic Toxicity	4. A relationship that shows how an organism's response to a substance change
E. Dose-response Relationship	5. The harmful effects that result from long-term exposure to a low concentra

Options :

- A - 2; B - 1; C - 3; D - 5; E - 4
- A - 1; B - 2; C - 3; D - 4; E - 5
- A - 2; B - 3; C - 1; D - 4; E - 5
- A - 3; B - 4; C - 2; D - 1; E - 5

Question Number : 133 Question Id : 6306801241782 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Read the given statement and conclusions carefully. Without making any assumptions, decide which of the given conclusions logically follow(s) from the statements.

Statement: The risk-benefit ratio is a critical factor in evaluating the safety of chemicals and processes. While the toxicity of a substance remains constant, the benefits of its use can justify the associated risks, provided that exposure is properly controlled.

Conclusions:

- I. The risk-benefit ratio becomes irrelevant when the toxicity of a chemical cannot be altered.
- II. Risk assessments are essential to determine if the benefits of using a chemical outweigh its risks.

Options :

- Only conclusion I follows.
- Only conclusion II follows.
- Neither conclusion I nor II follows.
- Both conclusions I and II follow.

Question Number : 134 Question Id : 6306801251130 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Select the option that is true regarding the following two statements labelled Assertion (A) and Reason (R).

Assertion (A): The toxic chemical nickel is a known carcinogen.

Reason (R): Nickel can cause DNA damage and disrupt the balance of other essential elements in the body.

Options :

- Both A and R are correct, and R is the correct explanation of A.
- A is true but R is false.
- A is false but R is true.
- Both A and R are true, but R is not the correct explanation of A.

Question Number : 135 Question Id : 6306801241759 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

A substance that has a harmful effect on living organisms and is a discrete chemical, like lead chromate, is known as a:

Options :

- Toxin
- Poison
- Toxicant
- Corrosive Substance

Question Number : 136 Question Id : 6306801250922 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following dose-response models is characterised by a non-linear increase in response with increasing dose, with no apparent threshold?

Options :

- ✘ Hormetic model
- ✘ Heterogenous model
- ✔ Non-linear model
- ✘ Threshold model

Question Number : 137 Question Id : 6306801241796 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the 'threshold value' of a toxic substance?

Options :

- ✘ The highest level of a substance that is toxic
- ✔ The lowest level at which a substance causes harm
- ✘ The level at which a substance is safe for humans
- ✘ The amount of a substance that causes no harm at all

Question Number : 138 Question Id : 6306801250994 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the term for the process by which acids and bases react with biological surfaces to form salts and water?

Options :

- ✘ Hydrolysis
- ✘ Polymerisation
- ✔ Neutralisation
- ✘ Derivatisation

Question Number : 139 Question Id : 6306801400680 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Match the following types of acid-base reactions in column A and their applications in toxicology (column B).

Column A (Reactions)	Column B (Applications)
1. Adsorption of acids on metal oxide surfaces	a. Assessment of atmospheric particulate matter toxicity and human health risks
2. Surface complexation of bases on clay mineral surfaces	b. Elucidation of mechanisms of toxicant uptake and accumulation in biological systems
3. Ligand exchange reactions of acids on biological surfaces	c. Understanding of pesticide adsorption and desorption on soil and sediment surfaces
4. Proton transfer reactions of bases on atmospheric particulate matter	d. Prediction of heavy metal mobility and bioavailability in soil and water

Options :

- ✘ 1-c; 2-b; 3-a; 4-d
- ✘ 1-b; 2-c; 3-d; 4-a
- ✘ 1-c; 2-d; 3-a; 4-b
- ✔ 1-d; 2-c; 3-b; 4-a

Question Number : 140 Question Id : 6306801241786 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

How is the Acceptable Daily Intake (ADI) typically determined?

Options :

- ✘ By assessing the total environmental concentration of a substance
- ✔ Through animal testing, using safety margins to account for human variability
- ✘ By measuring the immediate effects of exposure in humans
- ✘ By calculating the concentration of a substance in food and beverages

Question Number : 141 Question Id : 6306801241857 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

What is the main difference between selective and non-selective herbicides?

Options :

- ✔ Selective herbicides target only specific plants, while non-selective herbicides affect all plants.
- ✘ Selective herbicides are chemical-based, while non-selective herbicides are natural.
- ✘ Selective herbicides are more toxic than non-selective herbicides.
- ✘ Non-selective herbicides are less effective than selective herbicides in controlling weeds.

Question Number : 142 Question Id : 6306801251024 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Which of the following chemicals is known to cause both immediate and long-term respiratory toxicity in humans?

Options :

1. ✓ Particulate matter (PM)
2. ✗ Arsenic
3. ✗ DDT
4. ✗ Pyrethrin

Question Number : 143 Question Id : 6306801251106 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Select the option that is true regarding the following two statements labelled Assertion (A) and Reason (R).

Assertion (A): The reaction of hydrochloric acid with a concrete surface can lead to the formation of a chloride layer.

Reason (R): The chloride layer is formed due to the reaction of hydrochloric acid with the concrete surface, which creates a barrier against further acid attack.

Options :

1. ✓ Both A and R are correct, and R is the correct explanation of A.
2. ✗ A is false but R is true.
3. ✗ A is true but R is false.
4. ✗ Both A and R are true, but R is not the correct explanation of A.

Question Number : 144 Question Id : 6306801400655 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Match the following types of dose-relationship curves in column A and their characteristics in column B.

Column A (Types of dose relationship curves)	Column B (Characteristics)
1. Linear Dose-Response Curve	a. Increased response at low doses, followed by decreased response at high d
2. Non-Linear Dose-Response Curve	b. Presence of a threshold dose below which no effect is observed
3. Threshold Dose-Response Curve	c. Non-proportional relationship between dose and response, with potential for saturation
4. U-Shaped Dose-Response Curve	d. Directly proportional relationship between dose and response

Options :

1. ✗ 1-c; 2-b; 3-a; 4-d
2. ✓ 1-d; 2-c; 3-b; 4-a
3. ✗ 1-b; 2-a; 3-d; 4-c
4. ✗ 1-c; 2-a; 3-d; 4-b

Question Number : 145 Question Id : 6306801400702 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Match the following types of toxicants in column A and their sources/fate in column B.

Column A (Toxicants)	Column B (Sources/fate)
1. Polychlorinated Biphenyls (PCBs)	a. Agricultural applications, soil contamination, and groundwater pollution
2. Polycyclic Aromatic Hydrocarbons (PAHs)	b. Mining and smelting activities, water pollution, and bioaccumulation
3. Heavy Metals (e.g., Lead, Mercury)	c. Fossil fuel combustion, atmospheric deposition, and soil contamination
4. Pesticides (e.g., DDT, Chlorpyrifos)	d. Industrial processes, atmospheric deposition, and bioaccumulation

Options :

1. ✗ 1-d; 2-c; 3-a; 4-b
2. ✗ 1-c; 2-b; 3-a; 4-d
3. ✗ 1-a; 2-c; 3-d; 4-b
4. ✓ 1-d; 2-c; 3-b; 4-a

Question Number : 146 Question Id : 6306801241768 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

How does the concept of risk management integrate with risk-benefit analysis?

Options :

1. ✗ Risk management eliminates the need for risk-benefit analysis.
2. ✓ Risk-benefit analysis is used to inform risk management decisions.
3. ✗ Risk-benefit analysis occurs only after risk management is implemented.
4. ✗ Risk management focuses solely on minimising costs.

Question Number : 147 Question Id : 6306801241865 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 2 Wrong Marks : 0.66

Match the types of resistance and their mechanisms

Type of Resistance	Mechanism/Description
A. Insecticide Resistance	1. Resistance to herbicides in weeds
B. Fungicide Resistance	2. Evolution of pest immunity to pesticides
C. Managing Resistance	3. Developing resistant traits in plant pathogens
D. Herbicide Resistance	4. The development of new strategies to manage pesticide use
E. Pesticide Resistance	5. Adapting pests to survive chemical treatments

Options :

1. A - 5; B - 3; C - 4; D - 1; E - 2
2. A - 2; B - 3; C - 4; D - 1; E - 5
3. A - 1; B - 3; C - 2; D - 4; E - 5
4. A - 4; B - 1; C - 2; D - 5; E - 3

Question Number : 148 Question Id : 6306801251055 Question Type : MCQ Option Shuffling : Yes Correct Marks : 2 Wrong Marks : 0.66

Which of the following is the most specific and important physiological response to heavy metal toxicity?

Options :

1. Activation of metallothioneins
2. Increased calcium levels
3. Increased blood pressure
4. Low blood pressure

Question Number : 149 Question Id : 6306801251082 Question Type : MCQ Option Shuffling : Yes Correct Marks : 2 Wrong Marks : 0.66

Which of the given options is the most accurate conclusion of the following statement?

Statement: LD50 is a measure of the acute toxicity of a substance.

Options :

1. LD50 is a measure of the dose that is lethal to 50% of test subjects.
2. LD50 is a measure of chronic toxicity.
3. LD50 is only applicable to carcinogenic chemicals.
4. LD50 is not relevant to risk assessment.

Question Number : 150 Question Id : 6306801251169 Question Type : MCQ Option Shuffling : Yes Correct Marks : 2 Wrong Marks : 0.66

Which of the given options is the most accurate conclusion to the following statement?

Statement: The element selenium is an essential nutrient for humans, but excessive intake can cause toxicity.

Options :

1. Selenium toxicity is due to its ability to inhibit the activity of calmodulin.
2. Selenium toxicity is due to its ability to cause oxidative stress and damage to cellular components.
3. Selenium toxicity is due to its ability to inhibit the activity of enzymes involved in glucose metabolism.
4. Selenium toxicity is due to its ability to disrupt the balance of other essential elements in the body.