SCHOOL OF EDUCATION AND SOCIAL SCIENCES

SEPTEMBER-DECEMBER SEMESTER 2025 ACADEMIC YEAR

EXAMINATION FOR THE BACHELOR OF ART IN EDUCATION,

ECC 2213 ENVIRONMENTAL EDUCATION

Unit Code: ECC - **2213** **TIME:** 2 HOURS

EXAMINATION SESSION: **YEAR:** 2025

DAY: **Time :** 8:30-10:30 am

INSTRUCTIONS:

1. Attempt ALL the questions in **section A**
2. Attempt any two questions in **section B**
3. The entire exam is worth sixty (60) marks
4. Write only on the space provided on the answer sheet or otherwise instructed
5. Where necessary show your working clearly.
6. DO NOT attempt to access any library, online (audio, video, digital or electronic) or paper- based (written), sources for your answers unless this is clearly advised in the question.

SECTION A (20 Marks) – ANSWER ALL QUESTIONS

Question one

(a) Define the term Environmental education. (4mks)
(b) Explain six importance of Environmental Education. (6mks).
(c) Describe five components of an ecosystem. (5mks)
(d) Using relevant examples discuss five types of Environmental pollution. (5mks)

SECTION B (20 MARKS)- CHOOSE ANY TWO

Question Two

(a) Explain five causes of global warming. (5mks)
(b) Discuss five remedies and solutions to global warming. (5mks)

Question Three

(a) Critique the key goals of Environmental laws and policies. (5mks)
(b) Describe the trends in Environmental Management. (5mks)

Question Four

(a) Evaluate the policy tools used in Environmental Management. (5mks)
(b) Discuss the challenges in Environmental law and policy implementation. (5mks)

Question 5

(c) Examine the key values in environmental ethics. (5mks)
(d) Analyse the importance of environmental ethics and values. (5mks)

MARKING SCHEME

Question one

(a)Define the term Environmental Education

Environmental Education is a process that allows individuals to explore environmental issues, engage in problem-solving, and take action to improve the environment. It aims to develop a deeper understanding of environmental issues and the skills necessary to make informed and responsible decisions.

Environmental Education is the process of teaching and learning about the natural environment and how human activities impact it, with the goal of fostering knowledge, values, attitudes, and skills needed to protect and improve the environment for current and future generations.

(b)Explain six importance of Environmental Education

1.Promotes Environmental Awareness
It helps individuals understand the importance of the environment and the impact of human actions on natural resources.

2.Encourages Sustainable Development
It teaches people how to use resources responsibly, ensuring they are available for future generations.

3.Enhances Critical Thinking and Problem-Solving Skills
Learners are equipped with the ability to analyze environmental issues and propose practical solutions.

4.Promotes Participation and Responsibility
People become more active in taking part in community-based environmental conservation efforts.

5.Improves Quality of Life
By promoting a cleaner and healthier environment, it helps reduce health problems related to pollution and environmental degradation.

6.Supports Policy and Decision Making
Informed citizens can influence government policies and advocate for environmental protection laws and regulations.

(c)Describe five components of an ecosystem

1.Producers (Autotrophs)
These are organisms like green plants and algae that produce their own food through photosynthesis using sunlight.

2.Consumers (Heterotrophs)
These organisms depend on other organisms for food. They include herbivores, carnivores, and omnivores.

3.Decomposers
Fungi, bacteria, and some insects that break down dead organisms and recycle nutrients back into the soil.

4.Abiotic Components
Non-living physical and chemical parts of the environment such as sunlight, air, water, temperature, and minerals.

5.Habitat
The natural environment in which an organism lives and grows. It provides food, shelter, and the conditions necessary for survival.

(d)Using relevant examples,discuss five types of environmental pollution

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1.Air Pollution
Caused by the release of harmful gases like carbon monoxide, sulfur dioxide, and nitrogen oxides from vehicles, factories, and burning of fossil fuels.
Example: Smog in large cities caused by vehicle emissions.

2.Water Pollution
Occurs when harmful substances like chemicals, sewage, and plastics are discharged into water bodies.
Example: Oil spills in oceans or industrial waste in rivers.

3.Soil Pollution
The degradation of soil quality due to the use of pesticides, industrial waste, and non-biodegradable materials.
Example: Land contaminated by hazardous waste from factories.

4.Noise Pollution
Excessive or disturbing noise from vehicles, industries, and construction sites that negatively affects human and animal life.
Example: Loud machinery in urban construction areas.

5.Thermal Pollution
Occurs when industries release heated water or air into the environment, disrupting natural ecosystems.
Example: Hot water from power plants released into rivers, affecting aquatic life.

Questions Two

(a)Explain five causes of global warming

1.Gas Emissions
Burning fossil fuels (coal, oil, and natural gas) for energy releases carbon dioxide (CO_2), the main greenhouse gas that traps heat in the atmosphere.

2.Deforestation
Cutting down trees reduces the Earth's capacity to absorb CO_2, increasing the concentration of greenhouse gases.

3.Industrial Activities
Factories release not only CO_2 but also other greenhouse gases like methane (CH_4) and nitrous oxide (N_2O), especially in agriculture, manufacturing, and chemical production.

4.Agricultural Practices
Livestock farming produces large amounts of methane, and the use of synthetic fertilizers emits nitrous oxide—both potent greenhouse gases.

5.Waste Management
Landfills release methane as organic waste decomposes. Poor waste disposal practices also contribute to environmental degradation and warming.

(b)Discuss five remedies and solutions to global warming

1.Promoting Renewable Energy
Shifting from fossil fuels to solar, wind, and hydroelectric energy reduces greenhouse gas emissions.

2.Afforestation and Reforestation
Planting trees absorbs CO_2 from the atmosphere, helping balance the carbon cycle.

3.Energy Efficiency
Using energy-efficient appliances, buildings, and transportation systems helps reduce overall energy consumption and emissions.

4.Carbon Pricing and Taxes
Implementing carbon taxes or cap-and-trade systems encourages industries to reduce emissions by making pollution more costly.

5.Public Awareness and Education
Educating people about global warming and sustainable living encourages behavioral change at both individual and community levels.

Question Three

(a)Critique the key goals of Environmental Laws and Policies

1.Environmental Protection
Goal: Safeguard natural resources and ecosystems.
Critique: Often reactive rather than preventive, and enforcement can be weak.

2.Sustainable Development
Goal: Balance environmental, economic, and social needs.
Critique: In practice, economic interests sometimes override environmental protection.

3.Pollution Control and Waste Management
Goal: Minimize harmful emissions and manage waste.
Critique: Enforcement is inconsistent, especially in developing countries.

4.Public Participation
Goal: Involve citizens in decision-making.
Critique: Public input is sometimes ignored or limited by lack of transparency.

5.Biodiversity Conservation
Goal: Protect endangered species and habitats.
Critique: Implementation can be underfunded and poorly coordinated across sectors.

(b)Describe the treads in Environmental Management

1.Integration of Technology
Use of GIS, remote sensing, and AI for monitoring and managing environmental resources.

2.Community-Based Management
Empowering local communities to manage natural resources for sustainable use.

3.Green Economy and Sustainability
Growing emphasis on eco-friendly business practices and sustainable development models.

4.Public-Private Partnerships
Increased collaboration between governments, private companies, and NGOs in environmental projects.

5.Policy Innovation and Environmental Governance
Development of flexible and adaptive policies that address emerging environmental challenges like climate change and plastic pollution.

Question Four

(a)Evaluate the policy tools used in Environmental Management

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1.Regulatory Instruments (Command and Control)
Laws and regulations set limits on pollution and resource use.
-Effective for serious pollution;
- Can be rigid and costly to enforce.

2.Economic Instruments
Tools like taxes, subsidies, and carbon trading encourage environmentally friendly behavior.

- Market-based;
- May be difficult to implement fairly.

3.Voluntary Agreements
Industries commit to reducing emissions or conserving resources without legal enforcement.
- Flexible and cooperative;
- Often lack accountability.

4.Education and Information Tools
Raising awareness through campaigns and environmental education.
- Promotes long-term change;
- Slow impact, especially without supporting policies.

5.Planning and Zoning Tools
Land-use planning to protect sensitive ecosystems and manage urban growth.
- Prevents overexploitation;
-Requires strong coordination and enforcement.

(b)Discuss the challenges in Environmental Law and Policy Implementation

1.Lack of Political Will
Governments may prioritize economic growth over environmental protection.

2.Weak Enforcement Mechanisms
Insufficient funding, staff, or legal authority to enforce laws effectively.

3.Corruption and Poor Governance
Misuse of power and resources can undermine environmental initiatives.

4.Public Ignorance or Apathy
Lack of awareness or concern from the public leads to non-compliance.

5.Inadequate Legal Frameworks
Outdated or vague laws may not address current environmental problems like climate change or plastic waste.

Question Five

(a)Explain the key values in environmental ethics

1.Guides Responsible Behavior
Encourages individuals and societies to make choices that protect the environment.

2.Supports Environmental Laws and Policies
Ethical principles help shape and justify laws that govern environmental protection.

3.Promotes Global Cooperation
Shared ethical values facilitate collaboration across countries and cultures to address global issues like climate change.

4.Enhances Environmental Education
Instills values that promote a deeper respect for nature and commitment to sustainability.

5.Fosters Long-Term Thinking
Encourages decisions that consider the well-being of future generations, not just immediate benefits.