

Practice Worksheet on Circular Economy and Waste Management

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Subject: Environmental Science

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Long Answer Questions

1. Elaborate on the concept of a circular economy and its significance in mitigating the adverse effects of chemicals and waste. Discuss how sustainable production and consumption practices contribute to the transition towards a circular economy.
2. Discuss the global challenges related to the management of chemicals and waste, particularly the environmental and human health risks. Highlight the major international conventions aimed at regulating hazardous chemicals.
3. Define green chemistry and sustainable chemistry, listing their core principles. Provide practical examples of the implementation of green chemistry in diverse industrial sectors.
4. Describe the strategies and interventions implemented by the UNDP to promote sustainable chemicals and waste management globally. Explain the gender-responsive approaches adopted by UNDP in its interventions.
5. Discuss the significance of sustainable production and consumption (SCP) in

achieving circularity. Describe the key interventions to promote SCP practices across different sectors, encompassing both policy initiatives and consumer awareness campaigns.

Multiple Choice Questions

1. Which of the following best defines a circular economy?

- a) A circular economy minimizes waste and pollution, keeps products and materials in use, and regenerates natural systems.
- b) A linear economy focuses on maximizing resource use and minimizing waste generation.
- c) A traditional economy relies primarily on natural resources without much industrial intervention.
- d) A mixed economy combines elements of both market-based and centrally planned systems.

2. Which international convention primarily focuses on the transboundary movement of hazardous wastes?

- a) The Stockholm Convention
- b) The Kyoto Protocol
- c) The Basel Convention
- d) The Montreal Protocol

3. What is the correct order of the waste hierarchy?

- a) Reduce, reuse, recycle
- b) Reduce, reuse, recover, recycle
- c) Reduce, reuse, repurpose, recycle
- d) Reduce, recycle, recover

4. What type of economy aims to minimize waste and maximize resource utilization?

- a) Linear
- b) Traditional
- c) Circular
- d) Mixed

5. The 2030 Sustainable Development Goals are part of which broader framework?

- a) Sustainable consumption and production
- b) Sustainable development goals
- c) Sustainable development agenda
- d) Circular economy principles

Answer Key

Long Answer Questions - Expected Responses

1. Elaborate on the concept of a circular economy and its significance in mitigating the adverse effects of chemicals and waste. Discuss how sustainable production and consumption practices contribute to the transition towards a circular economy.

Expected Answer: Explain the concept of a circular economy and its relevance in minimizing the negative impacts of chemicals and waste. Discuss the role of sustainable production and consumption practices in achieving circularity.

2. Discuss the global challenges related to the management of chemicals and waste, particularly the environmental and human health risks. Highlight the major international conventions aimed at regulating hazardous chemicals.

Expected Answer: Discuss the challenges associated with managing chemicals and waste globally, particularly focusing on the environmental and health risks. Highlight international conventions aimed at controlling harmful substances.

3. Define green chemistry and sustainable chemistry, listing their core principles. Provide practical examples of the implementation of green chemistry in diverse industrial sectors.

Expected Answer: Explain the concept of green chemistry and sustainable chemistry and the principles that govern them. Describe ways to implement green chemistry principles in various sectors.

4. Describe the strategies and interventions implemented by the UNDP to promote sustainable chemicals and waste management globally. Explain the gender-responsive approaches adopted by UNDP in its interventions.

Expected Answer: Discuss the strategies and interventions implemented by UNDP to promote sustainable chemicals and waste management. Describe the gender-responsive approach adopted by UNDP in its interventions.

5. Discuss the significance of sustainable production and consumption (SCP) in achieving circularity. Describe the key interventions to promote SCP practices across different sectors, encompassing both policy initiatives and consumer awareness campaigns.

Expected Answer: Explain the significance of sustainable production and consumption practices in achieving circularity. Discuss different interventions to promote SCP practices across various sectors, including policy measures and consumer awareness initiatives.

Multiple Choice Questions – Correct Answers

1. Which of the following best defines a circular economy?

Correct Answer: A circular economy minimizes waste and pollution, keeps products and materials in use, and regenerates natural systems.

2. Which international convention primarily focuses on the transboundary movement of hazardous wastes?

Correct Answer: The Basel Convention

3. What is the correct order of the waste hierarchy?

Correct Answer: Reduce, reuse, recover, recycle

4. What type of economy aims to minimize waste and maximize resource utilization?

Correct Answer: Circular

5. The 2030 Sustainable Development Goals are part of which broader framework?

Correct Answer: Sustainable development agenda