

**International Green Warrior Olympiad (IGWO)****Sample Paper****Pattern and Marking Scheme**

<b>Grade</b>	<b>Topic/Section</b>	<b>No. of Questions</b>	<b>Marks per Question</b>	<b>Total Marks</b>
<b>Grade 5</b>	Green Champ	40	3	120
	Green Challenger	10	6	60
<b>Grand Total</b>		<b>50</b>		<b>180</b>

The total duration of the exam is 60 minutes. There's a negative marking of  $1/3^{\text{rd}}$  marks for every wrong answer.

**Syllabus**

Clean Water and Sanitation, Affordable and Clean Energy, Sustainable Cities and Communities, Responsible Consumption and Production, Climate Action, Life Below Water, Life on Land, Zero Hunger

For more details, visit <https://www.crestolympiads.com/green-olympiad-gwo>.

## Green Champ (Each Question is 3 Marks)

- Emily is a college student who is passionate about promoting sustainable transportation. She believes in reducing carbon emissions and minimising her environmental impact. Emily commutes to her campus using eco-friendly transportation options. How does Emily commute to her college campus?
  - Biking and using public transportation
  - Driving alone in a gas-guzzling car
  - Renting a limousine everyday
  - Using a motorbike without a helmet
- Only a small number of wildlife is found in the Arctic region. How will global warming affect the wildlife there?
  - The wildlife will have more water to drink when the ice melts.
  - The animals will lose their habitat when the ice in the Arctic melts.
  - There will be more animals migrating to the Arctic when the weather becomes warmer.
  - The rate of reproduction will increase for the wildlife when the temperature increases.
- A farmer in a region with poor soil quality is struggling to grow healthy crops. What can be done to improve agricultural productivity in this area?
  - Use more chemical fertilisers to compensate for poor soil quality
  - Continue current farming practices as they are sufficient
  - Implement soil improvement techniques such as adding organic matter and minerals
  - Abandon farming in this region and focus on other areas with better soil
- Which of the following is NOT a proper way to keep your surroundings clean?



Littering and throwing garbage anywhere



Using trash bins for disposing of waste



Recycling materials when possible



Keeping your home tidy

- As Ava traversed the city streets, she met a wise engineer named Marcus. He explained how crude oil was refined into various fuels like gasoline and diesel. What is the primary use of crude oil in energy production?



- a. Generating electricity
- b. Fueling cars and trucks
- c. Heating homes
- d. Producing biogas

6. Harry is drinking a soda from a can. He finishes the soda and throws the can away. What are some things that Harry can do to reduce, reuse, or recycle?
1. Recycle the aluminium can.
  2. Use a reusable water bottle instead of buying canned beverages.
  3. Fill up the can with a different beverage and reuse it.



- a. Only 1
- b. Only 2
- c. Only 1 and 2
- d. 1, 2 and 3

7. Kate is a young girl who lives in a small village in a developing country. Her village is located on the coast of the ocean, and it is often affected by storms and floods. In recent years, the storms and floods have become more frequent and severe. Kate is worried about the impact of climate change on her village and her community.

What are some of the potential impacts of climate change on Kate's village?

1. More frequent and severe storms and floods
2. Rising sea levels
3. Droughts and water shortages

- a. Only 1
- b. Only 2
- c. Both 2 and 3
- d. Only 1, 2 and 3

8. What is the effect of ocean pollution on marine life?



- a. It can entangle marine life.
- b. It can poison marine life.
- c. It can destroy marine habitats.
- d. All of these

9. In an experiment to study a terrestrial food web, scientists set up a controlled environment in a forest ecosystem. They observed an increase in the population of herbivorous insects. What would be the most likely consequence of this population increase on the food web?

- a. An increase in plant populations due to reduced herbivory
- b. A decrease in carnivorous insect populations due to competition
- c. A decrease in plant populations due to increase consumption of plants
- d. A decrease in soil microorganisms

10. What helps in making food more accessible to everyone?

1. Having a car to travel to distant markets
2. Having schools provide free meals
3. Having expensive restaurants in the locality
4. Having a limited number of grocery stores in the area

- a. Only 1  
b. Only 2  
c. Both 1 and 3  
d. Both 2 and 4

11. Which climatic condition is generally favourable for most crop growth?

1. Erratic rainfall and unpredictable weather patterns
2. Optimum rainfall and temperature
3. Extreme temperature fluctuations
4. Heavy rainfall throughout the year

- a. Only 1  
b. Only 4  
c. Both 1 and 3  
d. Both 2 and 4

12. During the rainy season, your family collects rainwater from the rooftop using a system of gutters and storage tanks. What is this method of collecting water called?

- a. Desalination  
b. Rainwater harvesting  
c. Filtration  
d. Well water collection

13. Jenny is concerned about climate change and wants to use an energy source that does not contribute to greenhouse gas emissions. Which type of energy should she opt for?



- a. Natural gas energy  
b. Wind energy  
c. Petroleum energy  
d. Coal energy

14. Kate is wrapping a gift. She uses a lot of wrapping paper and tape. What are some things that Kate can do to reduce, reuse, or recycle?

1. Use reusable gift bags instead of wrapping paper.
2. Use newspaper or fabric scraps to wrap the gift.
3. Reuse the wrapping paper and tape for future gifts

- a. Only 1  
b. Only 2  
c. Only 1 and 2  
d. 1, 2 and 3

15. Which human activity significantly contributes to the increase in greenhouse gas emissions, thus exacerbating climate change?



- a. Planting trees and enhancing green spaces.
  - b. Using renewable energy sources like solar and wind power.
  - c. Burning fossil fuels such as coal, oil, and natural gas for energy.
  - d. Decreasing industrial production and manufacturing
16. Anya is shopping for a new appliance. She knows that appliances can be a source of fossil fuel emissions when they are used. What are some things that Anya can do to choose an energy-efficient appliance?



Energy Efficiency

- a. Look for the Energy Star label.
  - b. Choose appliances with the highest energy efficiency rating.
  - c. Consider the size and capacity of the appliance to ensure it meets her needs.
  - d. All of these
17. A research institute is discussing the importance of mangrove forests. What is the crucial role of mangroves in coastal ecosystems?



- a. Enhancing water clarity for increased marine tourism
  - b. Reducing the effects of storm surges and erosion
  - c. Providing suitable environments for deep-sea creatures
  - d. Supporting the growth of coral reefs through chemical interactions
18. Alex noticed an increase in the demand for water and energy due to urbanisation. What could be a potential environmental consequence?
- a. Reduces pressure on water resources and promotes energy conservation.
  - b. Leads to water scarcity and energy consumption, impacting natural resources.
  - c. Ensures sustainable use of water and energy.
  - d. Enhances life of aquatic animals

19. You're having dinner with your family. Which meal would be the healthiest choice?



Grilled fish with steamed vegetables



Fried chicken with french fries and soda



Pizza with extra cheese



Candy bar, chips and soda

20. Sophie is keen on conserving water while tending to her garden. Which method would be the most water-efficient for watering her garden plants?

- Watering the garden during the hottest part of the day
- Watering plants at their base instead of spraying all over
- Using a hose without a nozzle for watering
- Adding colourful stones around the plants

21. Identify a prevalent issue contributing to water wastage within urban water supply systems:

- Overuse of water by residents
- Inefficient water treatment methods
- Excessive rainfall leading to runoff
- Leakage in pipes and infrastructure

22. What are some common sources of marine pollution?

- Plastic waste, oil spills, sewage and agricultural runoff
- Air pollution, deforestation, overfishing
- Noise pollution, light pollution, thermal pollution



- Only 1
- Only 2
- Both 2 and 3
- Both 1 and 3

23. Sarah, an adventurous soul, embarked on a solo camping trip in a remote area without access to clean drinking water. She finds a natural spring.

Which method would be MOST effective in purifying the water for safe consumption?



- a. Boil the water for at least 1 minute at rolling boil.  
b. Filter the water with a coffee filter.  
c. Leave the water in the sun for several hours.  
d. Add a few drops of bleach and wait 30 minutes.
24. In a distant village nestled in a valley, electricity access is limited. The community decides to install solar panels to power their homes and school. What primary environmental benefit does this initiative offer?
- a. Reduces carbon emissions from electricity production  
b. Depends on fossil fuels for energy generation  
c. Increases energy scarcity during cloudy days  
d. Creates pollution due to panel manufacturing
25. In a community initiative, residents organise a neighbourhood swap event where people exchange gently used items rather than discarding them. What does this scenario exemplify?
- a. Embracing waste reduction through reuse and upcycling initiatives  
b. Ignoring the potential of reusable items  
c. Disregarding the importance of recycling  
d. Promoting the disposal of items in landfills
26. In a bid to reduce paper waste at school, Emily's environmental club initiated a campaign to promote responsible paper usage. They aimed to encourage students to adopt eco-friendly practices.
- Which action would BEST support Emily's goal?
- a. Printing single-sided for every document without considering alternatives.  
b. Using new paper for every draft to ensure clarity and neatness.  
c. Discarding unused paper in the trash to avoid clutter.  
d. Using both sides of the paper before recycling to maximise its utility.
27. During a recent expedition, a team of marine biologists encountered a troubling sight: suffocation of marine animals and the destruction of coral reefs. What factor significantly endangers marine life, leading to extensive harm in oceanic ecosystems?
- a. Introduction of sustainable tourism in coastal areas  
b. Oil spills from ships and offshore platforms  
c. Coastal erosion due to natural causes  
d. Establishment of marine protected areas.

**28.** Your family loves watching TV, but you're worried about the electricity bill. You suggest replacing their old TV with a newer, energy-efficient model. Which feature should you prioritise for maximum energy savings?

- a. Larger screen size for better viewing experience
- b. Smart TV functions with internet connectivity
- c. LED display technology for reduced power consumption
- d. Higher resolution for sharper picture quality

**29.** Your school organises a science fair competition focused on alternative energy sources. You decide to present a case against fossil fuels. Which key cause of climate change should you prioritise highlighting?



- a. They deplete quickly and cannot be replenished like renewable resources.
- b. They contribute to air pollution and respiratory problems in cities.
- c. They cause oil spills and harm marine life in natural disasters.
- d. Burning them releases large amounts of greenhouse gases, contributing to global warming.

**30.** At a community event focused on environmental sustainability. At this sustainability-focused event, which everyday action could have the most significant impact on reducing an individual's carbon footprint?

- a. Using cloth bags instead of plastic ones for shopping.
- b. Taking shorter showers and conserving water at home.
- c. Upgrading home appliances to energy-efficient models.
- d. Choosing eco-friendly transportation options like cycling or walking for short trips.

**31.** While snorkelling, Mia notices vibrant coral reefs teeming with tiny fish and colourful invertebrates. What role do these small creatures play in the marine food web?



- a. Primary producers: They capture sunlight and produce food for herbivores.
- b. Secondary consumers: They hunt smaller fish and invertebrates for sustenance.
- c. Primary consumers: They graze on algae and provide food for larger predators.
- d. Apex predators: They occupy the top of the food chain with few natural predators.



32. You learn about a farming community facing water scarcity due to unsustainable irrigation practices. What alternative approach can minimise water usage and promote resource conservation?
- Invest in large-scale desalination plants to provide unlimited freshwater for irrigation.
  - Implement drip irrigation systems that deliver water directly to plant roots, minimising waste.
  - Grow drought-resistant crops adapted to the local climate and require less water.
  - Increase the use of traditional flood irrigation methods, ensuring adequate water coverage for all crops.
33. On a school trip to the mountains, some students decide to have a picnic after hiking. They use a nearby stream to wash their hands and fruits before eating. Unfortunately, the stream has been contaminated with untreated sewage upstream. Which of these students are most likely to get sick from waterborne diseases?



- Sheldon: He ate a sandwich with unwashed lettuce that had been dropped accidentally in the stream.
  - Missy: She only drank bottled water during the picnic.
  - George: He washed his hands in the stream but didn't touch any food with his hands.
  - Mary: She used a hand sanitiser after washing her hands in the stream before eating.
34. In a nearby town, there are several industries, households, and agricultural fields. The residents of the town have noticed changes in the water quality of a nearby river. Identify which of the following is not a primary source of water pollution in this particular scenario.
- Natural weathering of rocks and minerals
  - Chemical waste from industrial activities
  - Sewage from households and businesses
  - Sediment runoff from agricultural fields
35. Sasha's family decided to participate in an energy-saving competition. They were surprised to learn that their old refrigerator consumed the most electricity. What alternative could they consider to minimise energy consumption and keep food fresh?
- Replace it with a newer, energy-efficient model.
  - Unplug the refrigerator when not in use.
  - Adjust the temperature settings to a higher level.
  - Fill the refrigerator to capacity for better insulation.
36. While reading about renewable energy sources, Tina wonders how they can help fight climate change. Which of these statements is the most accurate?
- Renewable energy sources directly remove greenhouse gases from the atmosphere.
  - Using renewable energy reduces reliance on fossil fuels, which emit harmful gases.
  - Renewable energy sources like wind and solar power generate heat that warms the Earth.
  - Using renewable energy is expensive and impractical for everyday use.

37. A region faced the challenge of rampant deforestation, impacting the local climate. What weather phenomenon could be intensified due to the reduction of forest cover in this area?
- a. Tornadoes  
b. Avalanches  
c. Hailstorms  
d. Heatwaves
38. As part of their school's eco-friendly art exhibition, students were challenged to showcase artwork using only recycled or upcycled materials. What type of project would align best with the theme of waste reduction?
- a. Painting on a new canvas  
b. Digital artwork displayed on a computer screen  
c. Buying disposable plastic cups to make a mural  
d. Sculpture made from discarded metal parts
39. Sophie studies the effects of climate change on wildlife and discovers that certain species are shifting their habitats towards the poles. What term describes this phenomenon?
- a. Adaptation  
b. Migration  
c. Hibernation  
d. Extinction
40. While attending a conference on climate change, Leena learned about the concept of "carbon sinks" and how forests play a crucial role in storing carbon dioxide. What does this mean for the fight against climate change?
- Planting trees can significantly reduce the amount of carbon dioxide in the atmosphere.
  - Forests can act as a buffer against the effects of rising global temperatures.
  - Protecting existing forests is less effective than planting new ones.
- a. Only 1  
b. Only 1 and 2  
c. Only 2 and 3  
d. 1, 2 and 3

## Green Challenger (Each Question is 6 Marks)

41. Why is rainwater harvesting beneficial for water management in regions prone to water scarcity?
- It provides an alternative source of water during dry periods.
  - It increases dependency on municipal water supplies.
  - It leads to excessive water wastage.
  - It has a negative impact on the environment.

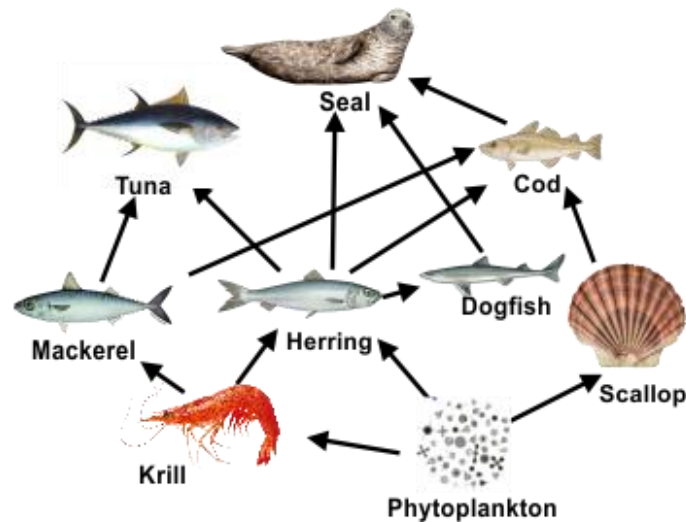


- a. Only 1  
b. Only 2  
c. Both 2 and 3  
d. Both 2 and 4

42. Arya is a marine scientist who is studying the impact of climate change on the marine food web. She notices that the populations of some fish species are declining, while the populations of other fish species are increasing. She also notices that the populations of some phytoplankton species are declining, while the populations of other phytoplankton species are increasing.

What could be the reason for these changes in the marine food web?

1. Climate change is causing the ocean to become warmer, which is affecting the distribution of fish species.
2. Climate change is causing the ocean to become more acidic, which is affecting the distribution of phytoplankton species.
3. Climate change is causing the ocean to become more polluted, which is affecting the distribution of both fish and phytoplankton species.



- a. Only 1  
b. Only 2  
c. Only 2 and 3  
d. 1, 2 and 3
43. Pam wants to help the bird population recover. She is considering a number of different conservation strategies.
- What are some of the conservation strategies that Pam could consider?
1. Planting trees to provide more nesting sites and food sources
  2. Reducing the amount of deforestation in the area
  3. Educating people about the importance of protecting the forest ecosystem
- a. Only 1  
b. Only 2  
c. Only 2 and 3  
d. 1, 2 and 3
44. You are a city planner who is designing a new neighbourhood. What renewable energy sources could you incorporate into the design of the neighbourhood?
1. Solar panels on rooftops
  2. Wind turbines in parks and open spaces
  3. Geothermal systems to heat and cool homes and businesses
  4. Diesel powered generators

- a. Only 1
- b. Only 2
- c. 1,2 and 3
- d. 1, 2, 3 and 4

45. In a remote village, a community initiative introduced a water purification system, significantly improving water quality. Consider the multifaceted impact of the improved water quality on the village.

What aspects of community life might have been positively influenced by this initiative?

- a. Increased agricultural yield due to better irrigation
- b. Reduction in waterborne diseases, promoting better health
- c. Decline in local wildlife population due to altered water composition
- d. Higher electricity consumption due to improved water availability

46. Instructions: For each effect of climate change listed below, match it to the most likely cause from the options provided.

Effects:

- A. Melting glaciers and snow cover.
- B. More frequent and intense hurricanes and storms.
- C. Droughts and water scarcity.

Causes:

- 1. Overuse of water resources and unsustainable agricultural practices.
- 2. Burning fossil fuels and deforestation, increasing greenhouse gases like carbon dioxide.
- 3. Altered weather patterns due to rapid urbanisation and land use changes.

- a. A - 1, B - 2, C - 3
- b. A - 2, B - 3, C - 1
- c. A - 3, B - 2, C - 1
- d. A - 2, B - 1, C - 3

47. Sarah noticed that her house generated a lot of waste daily, especially paper. She wanted to help reduce this waste. Which action would be the best way for Sarah to contribute to waste reduction?

- 1. Buying new toys regularly
- 2. Using separate bins for recyclables and non-recyclables
- 3. Throwing away old newspapers immediately
- 4. Using disposable cups for drinking water



- a. Only 1
- b. Only 2
- c. Both 2 and 3
- d. Both 3 and 4

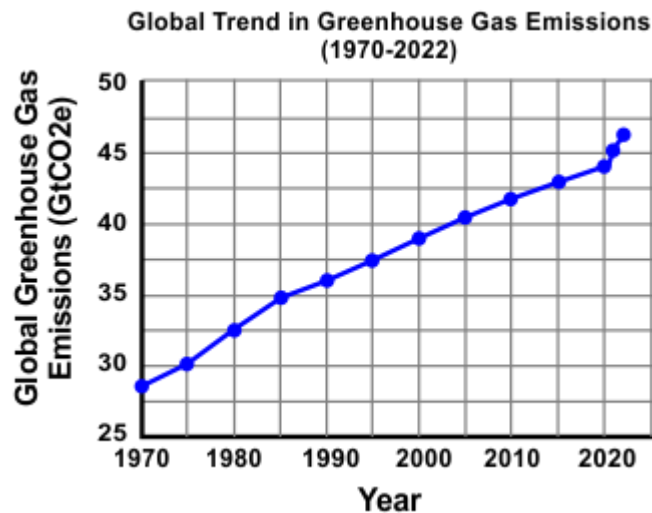
48. In a coastal village, villagers noticed a decline in fish population and an increase in water-borne illnesses. They discovered that untreated sewage was being discharged into the nearby ocean, affecting marine life and the health of those relying on the sea for their livelihood.

What steps did the villagers take to address the declining fish population and water-borne illnesses?



- Dumping more waste into the ocean, decreasing marine life, and ignoring the impact on livelihoods.
- Ignoring the problem, increasing fishing activities, and continuing to discharge untreated sewage.
- Encouraging more pollution, reducing fishing efforts, and avoiding discussions about water-borne illnesses.
- Initiating a cleanup drive, treating sewage before disposal, and educating the community about responsible waste management.

49. Imagine you are a scientist investigating the environment, and you came across a graph showing the global trend in greenhouse gas emissions over the past 50 years. The graph clearly indicates a significant increase in emissions. What can be inferred from this data?



- The transition to clean energy is happening rapidly and effectively.
- The increase in emissions is primarily due to population growth.
- The adoption of clean technology has not yet had a significant impact.
- The use of fossil fuels remains dominant, contributing to rising emissions.

50. A local farmer notices a decrease in insect populations in his fields. This decline coincides with the decrease in crop yield as well. He remembers recently switching to a new type of pesticide.

What connection can be made between these observations?

- The pesticide killed the insects, which were helping the crops grow.
- The pesticide is making the soil less fertile, so the crops cannot grow properly.
- The decrease in insects is due to a natural change in the environment.
- The farmer's observations are unrelated to his pesticide use.

- Only 1
- Only 1 and 2
- Only 2, 3 and 4
- 1, 2, 3 and 4

## Answer Key

1.	a	2.	b	3.	c	4.	a	5.	b	6.	d	7.	d
8.	d	9.	c	10.	b	11.	b	12.	b	13.	b	14.	d
15.	c	16.	d	17.	b	18.	b	19.	a	20.	b	21.	d
22.	a	23.	a	24.	a	25.	a	26.	d	27.	b	28.	c
29.	d	30.	d	31.	c	32.	b	33.	a	34.	a	35.	a
36.	b	37.	d	38.	d	39.	b	40.	b	41.	a	42.	d
43.	d	44.	c	45.	b	46.	b	47.	b	48.	d	49.	d
50.	b												