

2025 Iowa Envirothon Current Issue Exam

Team _____

Each Question is worth three points – 75 points possible

- 1) How much land in the world is considered forest?
 - a. Less than 20%
 - b. About 30%
 - c. More than 45%
 - d. None of the above

- 2) Forests are of vital importance today because they provide all but which of the following ecosystem services?
 - a. Fuel
 - b. Fiber
 - c. New plant species
 - d. Carbon sequestration

- 3) Which of the following is an effect of recent climate change on forests?
 - a. Decrease in wildfires
 - b. Decrease in non-native species competition
 - c. Increased disease pressure
 - d. All of the above are effects

- 4) Which of the following is NOT considered a current stressor of the world's forests?
 - a. Wildfires
 - b. Increased precipitation
 - c. Mechanization of forest management
 - d. Drought

- 5) Globally, forests are shifting towards:
 - a. Dense coniferous forests
 - b. Shorter -lived trees species, shrubs, and herbaceous plants
 - c. Open stands of long-lived deciduous forests
 - d. Increased forest cover

- 6) In the carbon cycle, how is stored carbon released back into the environment?
 - a. Transpiration by plants
 - b. Photosynthesis
 - c. Decomposition of plants and animals
 - d. All of the above

- 7) The majority of forest disease pathogens are of what type?
- Fungi
 - Bacterial infections
 - Blight
 - Insects
- 8) Forest pest control strategies may involve which of the following actions?
- Diversifying tree populations
 - Removal of host plants
 - Pruning or removal of diseased trees
 - All of the above.
- 9) Which of the following is false about alien insects and diseases?
- Often referred to as “exotic” species
 - Emerald Ash Borers and Dutch Elm Disease are examples
 - Alien species could become invasive
 - Usually do not spread beyond their native range
- 10) Which of the following is not considered a destructive “exotic” invasive insect in Canadian forests?
- Japanese beetle
 - Brown Spruce Longhorn beetle
 - Mountain Pine beetle
 - Emerald Ash Borer
- 11) High intensity forest fires have which of the following effects on forest ecosystems?
- Scorched soils are ideal for germinating conifer seeds
 - Ash covered soils are less prone to erosion
 - Wildlife corridors are disconnected
 - All of the above are effects
- 12) Which of the following is NOT a benefit of low intensity forest fires?
- Newly opened areas allow sunlight to reach the forest floor
 - Ash from burnt plant materials enrich the soil
 - Grasses and low shrubs quickly replace tree cover
 - Seeds germinate faster following heat treatment
- 13) Which of the following is true about Canada’s Boreal Forests?
- Over ½ of the world’s Boreal Forests are located in Canada.
 - The climate of Boreal Forests is short, cold, wet winters and long dry summers
 - Trees species are mostly pine, spruce, fir, and tamarack coniferous trees
 - All of the above are true

- 14) Which is NOT a true statement about Boreal Wetlands in Canada?
- a. Act as a water filter
 - b. Are made up mostly of peat soils
 - c. Supports nearly ½ of the North American duck population
 - d. All of the above are true.
- 15) Another name for a Boreal Forest biome is:
- a. Permafrost
 - b. Taiga
 - c. Forest tundra
 - d. Temperate Snow Forest
- 16) Which is true about average weather patterns in the US?
- a. Extreme conditions are becoming less common.
 - b. Precipitation has decreased in the lower 48 states
 - c. Heat waves are shorter but more intense
 - d. More intense precipitation events
- 17) In the long term, which of the following population activities seems to be least affected by climate change?
- a. Agriculture
 - b. Fishing
 - c. Migration
 - d. Forestry
- 18) Examples of long-term changes to our climate caused by greenhouse gases include:
- a. Increased precipitation has decreased water needs worldwide
 - b. Lower average temperatures have increased the spread of disease
 - c. Heat waves are occurring more often and are more intense
 - d. All of the above are examples
- 19) Climate change in Canada may have which of the following effects?
- a. Permafrost depth will increase
 - b. Storm surges will decrease in coastal areas
 - c. Glaciers/icecaps melting may cause sea level rise
 - d. All the above are possible effects
- 20) Which of the following is considered an example of a greenhouse gas?
- a. Water vapor
 - b. Nitrogen
 - c. Hydrogen oxide
 - d. Anhydrous ammonia

- 21) Greenhouse gases come from all but which of the following human activities?
- Raising livestock
 - Storing renewable energy
 - Storing wastes in landfills
 - Clearing hardwood forests
- 22) According to the World Health Organization, (WHO), mitigating the effects of climate change can be accomplished by all of the following except:
- Finding and developing new energy sources
 - Building climate resilient health systems
 - Transitioning to a clean energy economy
 - Reducing carbon emissions
- 23) Which of the following statements is true concerning the effect of populations on climate change worldwide?
- Richest countries in the world account for more carbon dioxide emissions than poorest countries
 - Poorest countries account for a higher % of our population worldwide than the richest countries
 - Poorest countries account for a lower % of carbon dioxide emissions than richest countries
 - All of the above are true statements
- 24) A recommended global response to the threat of destructive climate change is:
- Reach net zero carbon dioxide emissions by 2030
 - Reduce carbon dioxide emissions by 50% by 2050
 - Limit average surface temperature rise to no more than 1.5 degrees C above pre-industrial levels
 - All of the above
- 25) Which of these groups will be least able to cope with the effects of global change?
- Developing countries with climate resilience
 - Developed countries with highly developed industries
 - Developing countries with weak health systems
 - Developed countries with high incomes

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KEY

Current Environmental Issue Study Resources-Part A

Key Topic #1: Climate Change Projections

Key Topic #2: Forest Health in a Changing Climate

Key Topic #6: The Boreal Forest

Current Environmental Issue Answer key:

- 1) B
- 2) C
- 3) C
- 4) B
- 5) B
- 6) C
- 7) A
- 8) D
- 9) D
- 10) A
- 11) C
- 12) D
- 13) C
- 14) D
- 15) B
- 16) D
- 17) C
- 18) C
- 19) C
- 20) A
- 21) B
- 22) A
- 23) D
- 24) C
- 25) C