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Date: \_\_\_\_\_

## Investigating Climate Change and Remote Sensing Assessment

*Instructions: Please read each question carefully and circle the single correct answer.*

1. Approximately how much **carbon dioxide** is in the atmosphere today?
  - a) 190 parts per million
  - b) 290 parts per million
  - c) 390 parts per million
2. Approximately how much **carbon dioxide** was in the atmosphere in the year 1850?
  - a) 190 parts per million
  - b) 290 parts per million
  - c) 390 parts per million
3. What **greenhouse gas** is produced by burning a fossil fuel?
  - a) Carbon dioxide
  - b) Carbon monoxide
  - c) Helium
  - d) Hydrogen
4. What country emits the **most** carbon dioxide annually?
  - a) China
  - b) India
  - c) Russia
  - d) United States

5. Which of the following countries emits the **most** carbon dioxide **per person** annually?
- a) China
  - b) India
  - c) Russia
  - d) United States
6. Which one of the following atmospheric gases is good at **trapping heat** from the earth's surface?
- a) Hydrogen
  - b) Oxygen
  - c) Water Vapor
7. The current average temperature of the earth's surface is approximately 58 degrees Fahrenheit. What was the **average temperature** of the earth's surface during the last ice age?
- a) Between 16 and 21 degrees Fahrenheit
  - b) Between 26 and 31 degrees Fahrenheit
  - c) Between 36 and 41 degrees Fahrenheit
  - d) Between 46 and 51 degrees Fahrenheit
8. The current average temperature of the earth's surface is approximately 58 degrees Fahrenheit. If no additional actions are taken to reduce global warming, what does the International Panel on Climate Change (IPCC) estimate that the **temperature** will be in the year 2050?
- a) Between 50 and 51 degree Fahrenheit
  - b) Between 60 and 61 degrees Fahrenheit
  - c) Between 70 and 71 degrees Fahrenheit
9. What decade was the **warmest** since 1850?
- a) 1970 to 1979
  - b) 1980 to 1989
  - c) 1990 to 1999
  - d) 2000 to 2009

10. Which of the following is a **fossil fuel**?
- a) Coal
  - b) Hydrogen
  - c) Solar Energy
  - d) Wood
11. Where does the **energy** from fossil fuels originate from?
- a) From fossilized remains of dinosaurs many years ago
  - b) From photosynthesis by plants many years ago
  - c) From uranium deposits formed many years ago
12. What would happen to the levels of carbon dioxide if the United States **stopped burning** fossil fuels?
- a) Carbon dioxide in the atmosphere would increase
  - b) Carbon dioxide in the atmosphere would decrease
  - c) Carbon dioxide in the atmosphere would stay the same
13. What is the **current status** of most of the world's glaciers?
- a) They are growing
  - b) They are melting
  - c) They remain unchanged
14. Among the following factors, what is the **number one contributor** to rising sea levels?
- a) Melting of land ice in the Antarctica
  - b) Melting of sea ice on the Arctic Ocean
  - c) Warmer ocean temperatures
15. How high do scientists estimate that global **sea levels** rose between 1900 and 2000?
- a) Between 6 and 9 inches
  - b) Between 10 and 13 inches
  - c) Between 14 and 17 inches
16. What is the **leading cause** of coral bleaching?
- a) Acid rain
  - b) Chemical spills in the ocean
  - c) Cruise ship traffic
  - d) Warmer ocean temperatures

17. Which of the following is a **major producer** of carbon dioxide?
- a) Burning of fossil fuels
  - b) Evaporation of earth's glaciers
  - c) Excrement from cows
  - d) Pesticides used in farming
18. What would be the probable **long-term result** of a worldwide effort to plant trees?
- a) It would increase global warming
  - b) It would reduce global warming
  - c) It would have no impact on global warming.
19. Which of the following factors are all indicators of **climate**?
- a) 30-year, daily and temperature
  - b) 30-year, precipitation and temperature
  - c) daily, 30-year and precipitation
  - d) daily, precipitation and temperature
20. Which of the following factors are all indicators of **weather**?
- a) 30-year, daily and temperature
  - b) 30-year, precipitation and temperature
  - c) daily, 30-year and precipitation
  - d) daily, precipitation and temperature
21. Which phenomena is an indicator of **climate**?
- a) A severe blizzard in Washington D.C.
  - b) A heat wave in the Midwestern United States
  - c) Three strong hurricanes in the Gulf of Mexico in one year
  - d) Warmer ocean temperatures worldwide
22. Which phenomena is an indicator of **weather**?
- a) Record warm January temperatures in Calgary, Canada this year
  - b) Record warm ocean temperatures worldwide
  - c) Receding glaciers
  - d) Expanding deserts in the southwestern United States over several decades

**STOP**

Last revised 2/14/2012 (Dave, Andy & Joe)