**Global Warming quiz 2- Observed temperature changes version D**

1. In the twentieth century, the rate of earth's average temperature rise was closest to

|  |  |
| --- | --- |
|  | a) 0.7 °C per year |
|  | b) 0.7 °C per century |
|  | c) 0.7 °C per decade |

2. Compared with the first half of the twentieth century, the rate of earth's average temperature rise during the second (latter) half was

|  |  |
| --- | --- |
|  | a) about the same |
|  | b) twice as much |
|  | c) half as much |

3. Ocean temperatures are increasing more slowly than land temperatures because oceans have more heat capacity and because evaporation cools the water.

|  |  |
| --- | --- |
|  | a) true |
|  | b) false |

4. No direct method exists that permits an independent measurement of the heat content of the oceans, other than the fact that the air is warming

|  |  |
| --- | --- |
|  | a) true |
|  | b) false |

5. Proxy temperatures measurements are defined as indirect inferences gathered from ice cores, tree rings, and so forth

|  |  |
| --- | --- |
|  | a) true |
|  | b) false |

6. The [Reconstructed Temperature](https://en.wikiversity.org/wiki/File%3A2000_Year_Temperature_Comparison.png) (0-2000 AD) plot in "Observed Temperature Changes" shows temperature measurements, as well as what curious feature? (See also [Divergence problem](https://en.wikipedia.org/wiki/Divergence_problem))

|  |  |
| --- | --- |
|  | a) the fact that the different proxy measurements deviate considerably from the average of all proxy measurements |
|  | b) the Little Ice Age being less prominent than the Medieval Warming period |
|  | c) a tiny gap at the end of the proxy measurements |
|  | d) a divergence between the tree and pollen proxy measurements |

7. A rise in the sea level is associated with global warming because

|  |  |
| --- | --- |
|  | a) both of these are true |
|  | b) water tends to expand as it warms |
|  | c) ice and snow melts |

8. Ocean temperatures are increasing more slowly than land temperatures because the oceans are absorbing less heat energy from the sun

|  |  |
| --- | --- |
|  | a) true |
|  | b) false |

9. The [Reconstructed Temperature](https://en.wikiversity.org/wiki/File%3A2000_Year_Temperature_Comparison.png) (0-2000 AD) plot in "Observed Temperature Changes" shows temperature measurements. The solid black line represents

|  |  |
| --- | --- |
|  | a) the Medieval Warming Period |
|  | b) tree proxy measurements |
|  | c) thermometer measurements |
|  | d) the Little Ice Age |
|  | e) a 10 year average |

10. Proxy temperatures measurements are defined as measurements made using measurements from space.

|  |  |
| --- | --- |
|  | a) true |
|  | b) false |

11. Compared with the second half of the twentieth century, the rate of earth's average temperature rise during the first half was

|  |  |
| --- | --- |
|  | a) twice as much |
|  | b) half as much |
|  | c) about the same |

12. The Earth's average surface temperature rose by approximately \_\_\_\_\_\_\_ per decade over the period 1906–2005.

|  |  |
| --- | --- |
|  | a) 0.07°C |
|  | b) 0.7°C |
|  | c) 7.0°C |

13. What happens when water is heated?

|  |  |
| --- | --- |
|  | a) it expands at temperatures above 3.98°C and contracts below 3.98°C |
|  | b) it absorbs CO2 |
|  | c) it expands at temperatures below 3.98°C and contracts above 3.98°C |

14. The urban heat island effect refers to the fact that urban areas tend to be hotter than rural areas. The urban heat island effect is estimated to account for approximately \_\_\_\_\_ of the temperature rise over the past century.

|  |  |
| --- | --- |
|  | a) 3% |
|  | b) 0% |
|  | c) 0.3% |
|  | d) 30% |