ONTARIO SCIENCE, GRADE 10, ACADEMIC (SNC2D) · UNIT C · 25 QUESTIONS

Earth and Space Science: Climate Change — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **In the greenhouse effect, greenhouse gases in the atmosphere mainly**

- A absorb and re-emit some outgoing infrared radiation
- B reflect all sunlight back to space
- C produce oxygen for photosynthesis
- D block all sunlight from reaching Earth

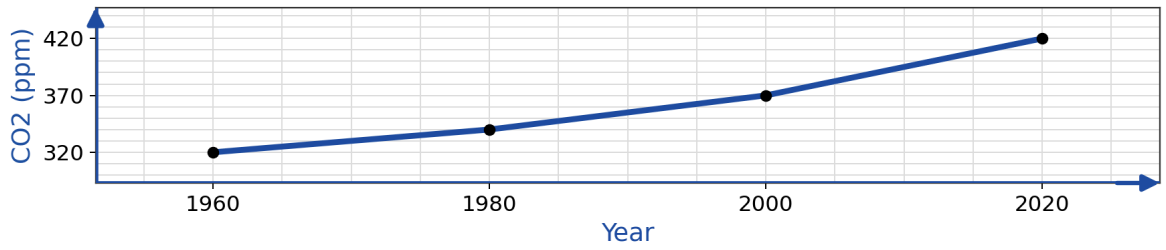
Understand It with Pulse | Flag a mistake

2 **Which gas is the most abundant human caused greenhouse gas added to the atmosphere by burning fossil fuels?**

- **A** Argon
- **B** Carbon dioxide
- **C** Oxygen
- **D** Nitrogen

Understand It with Pulse | Flag a mistake

3 **The graph shows measured atmospheric carbon dioxide over time. The carbon dioxide level in 2000 , in parts per million, is**



ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A large volcanic eruption can cause short term global cooling because volcanic particles in the atmosphere**

- A increase the amount of oxygen in the air
- B stop ocean currents completely
- C reflect some sunlight back to space
- D absorb all outgoing infrared radiation

Understand It with Pulse | Flag a mistake

5 **Which human activity increases atmospheric carbon dioxide both by releasing stored carbon and by removing trees that absorb it?**

- A Recycling paper
- B Using public transit
- C Installing solar panels
- D Deforestation

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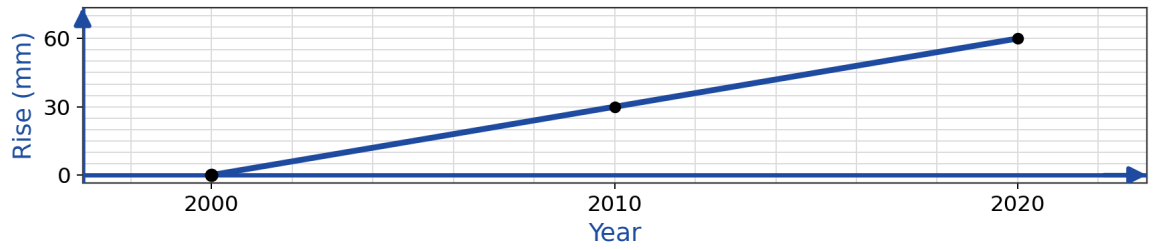
6 **Sea level rises as the climate warms mainly because ocean water expands as it warms and because**

- **A** land ice melts and adds water to the oceans
- **B** rainfall over land stops completely
- **C** ocean water evaporates into space
- **D** sea ice becomes thicker

Understand It with Pulse | Flag a mistake

7 **The graph shows measured sea level rise over time. The sea level rise in 2010 , in millimetres, is**



ANSWER _____

Understand It with Pulse | Flag a mistake

8 **Which gas is released in large amounts by livestock and by decomposing organic material in wetlands and landfills?**

A Helium

B Methane

C Oxygen

D Nitrogen

Understand It with Pulse | Flag a mistake

9 **A temperature record shows a steady rise from 14.0 degrees Celsius to 15.0 degrees Celsius over 100 years. The total rise, in degrees Celsius, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **When carbon dioxide dissolves in ocean water, the water becomes more**

A Salty

B Radioactive

C Acidic

D Basic

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11 **Which effect of climate change threatens low lying coastal communities most directly?**

A Shorter summers in the Arctic

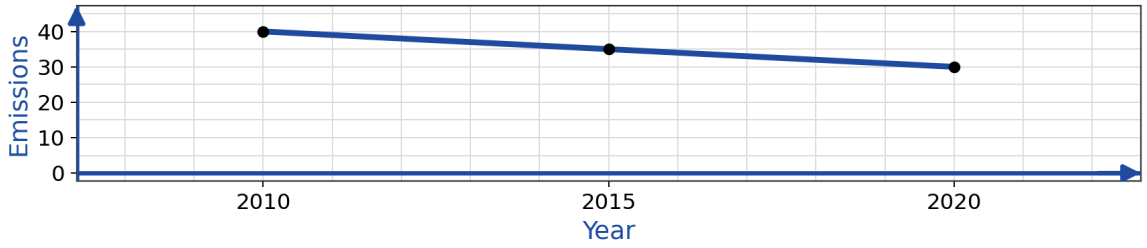
B Less sunlight reaching Earth

C Colder ocean water everywhere

D Sea level rise and stronger storm surges

Understand It with Pulse | Flag a mistake

12 **The graph shows a city's measured carbon dioxide emissions over time. The emissions in 2015 , in units, are**



ANSWER

Understand It with Pulse | Flag a mistake

13 **Which initiative reduces greenhouse gas emissions from electricity generation?**

A Replacing coal power with wind and solar power

B Burning more coal for electricity

C Leaving lights on all night

D Building more gasoline cars

Understand It with Pulse | Flag a mistake

14 **Changes in Earth's orbit and tilt over tens of thousands of years are a natural factor that can change**

A Soil colour only

B Climate over long time scales

C Daily weather only

D Tides only

Understand It with Pulse | Flag a mistake

15 **As Arctic sea ice melts, darker ocean water is exposed. The darker water absorbs more sunlight, which causes further warming. This is**

A an example of photosynthesis

B an example of condensation

C a positive feedback loop

D a negative feedback loop

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16 **Which human activity adds nitrous oxide, a greenhouse gas, to the atmosphere?**

A Planting trees in a city

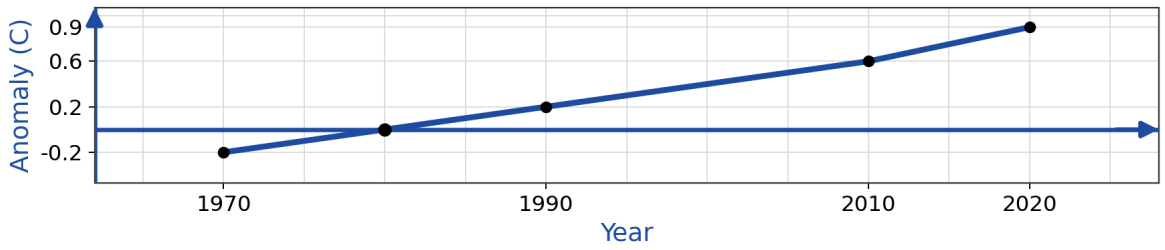
B Riding a bicycle to school

C Insulating a house

D Using nitrogen fertilizers on farm fields

Understand It with Pulse | Flag a mistake

17 **The graph shows measured global temperature anomalies over time. The anomaly in 2010 , in degrees Celsius, is**



ANSWER

Understand It with Pulse | Flag a mistake

18 **Which statement about weather and climate is correct?**

- A Weather is short term conditions; climate is long term patterns
- B Weather and climate mean exactly the same thing
- C Climate changes every hour
- D Weather is measured over thirty years

Understand It with Pulse | Flag a mistake

19 **Reforestation helps address climate change because growing trees**

- A warm the atmosphere directly
- B absorb carbon dioxide from the atmosphere
- C release large amounts of methane
- D block all rainfall

Understand It with Pulse | Flag a mistake

20 **The average September Arctic sea ice area, in million square kilometres, for each decade from the 1980s to the 2010s was: 1980s: 7.2, 1990s: 6.7, 2000s: 5.6, 2010s: 4.7. The best conclusion from these numbers is that**

- A Arctic sea ice area has increased every decade
- B no conclusion can be drawn from a table
- C Arctic sea ice area has declined over that period
- D Arctic sea ice area has stayed constant

Understand It with Pulse | Flag a mistake

21 **Which energy efficiency measure reduces heating emissions from a house?**

- A Leaving windows open in winter
- B Heating empty rooms all day
- C Using an old inefficient furnace
- D Adding insulation and sealing drafts

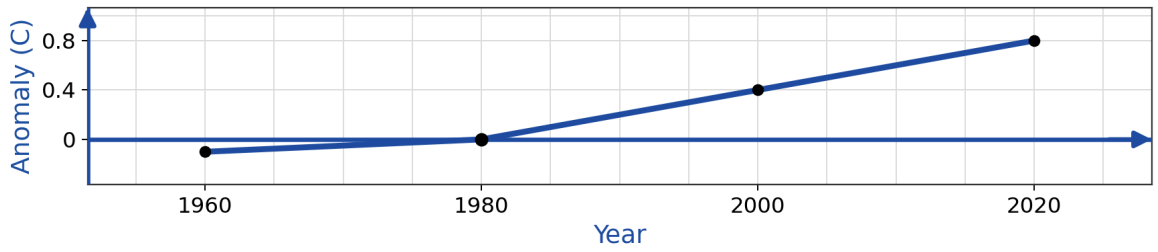
Understand It with Pulse | Flag a mistake

22 **Thawing permafrost can worsen warming because it releases**

- **A** Methane and carbon dioxide
- **B** Oxygen only
- **C** Nitrogen gas only
- **D** Water vapour only

Understand It with Pulse | Flag a mistake

23 **The graph shows measured global temperature anomalies over time. In which year shown is the anomaly highest?**



- **A** 1960
- **B** 1980
- **C** 2000
- **D** 2020

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24 **Which action by an individual most directly reduces personal transportation emissions?**

A Idling a car engine for long periods

B Flying more often for short trips

C Walking, cycling, or taking transit instead of driving alone

D Driving alone for every short trip

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25 **If a glacier loses 12 metres of thickness over 6 years at a steady rate, the loss per year, in metres, is**

ANSWER _____

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ANSWER KEY

1. A
2. B
3. 370
4. C
5. D
6. A
7. 30
8. B
9. 1
10. C
11. D
12. 35
13. A
14. B
15. C
16. D
17. 0.6
18. A
19. B
20. C
21. D
22. A
23. D
24. C
25. 2

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