

Unit 4: Climate Change Summative Quiz

Part A: Multiple Choice

Select the BEST answer for each question and answer on the SCANTRON provided

- Which of the following is not a description of the climate of a region?
 - The Northwest territories typically has low levels of precipitation throughout the year.
 - The average temperature in Toronto in the summer is 25°C.
 - 50 mm of rain was recorded in Edmonton on September 12.
 - The Arctic experiences 24 hours of darkness in the winter months.
- In which layer of the atmosphere is most of the oxygen located?
 - exosphere
 - mesosphere
 - stratosphere
 - troposphere
- Which of the following statements regarding ozone is **incorrect**?
 - Ozone is being destroyed much quicker than it is generated.
 - Ozone is beneficial regardless of which layer of the atmosphere it is in.
 - Ozone is being created when UV radiation reacts with car exhaust.
 - Ozone absorbs the high energy UV radiation coming from the Sun.
 - None of the above is incorrect.
- What is the main reason why the Earth's temperature remains relatively constant?
 - The Earth re-emits the same amount of energy as it absorbs from the Sun.
 - The Sun's radiation has weakened before it reaches the Earth's atmosphere.
 - Most of the Sun's radiation is reflected off the atmosphere back into space.
 - The energy from the Sun is absorbed by the plants for photosynthesis.

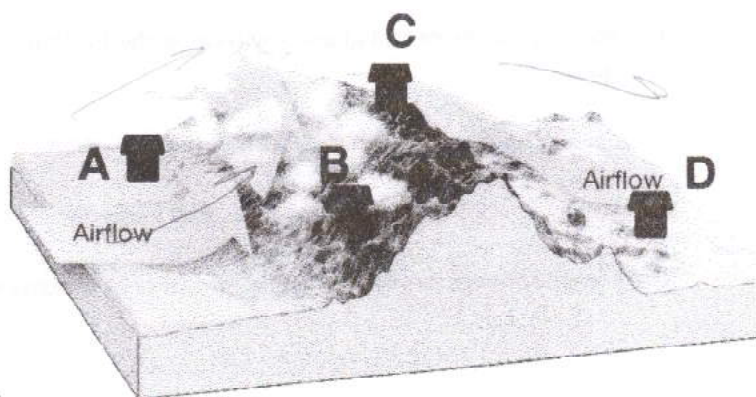
Total

20 / 20

Parent Signature

Use the diagram on the right for Q #5 and #6.

- Which location most likely has cooler than normal summers with lots of precipitation?
 - A
 - B
 - C
 - D
- Which location will be most affected by the rain shadow effect?
 - A
 - B
 - C
 - D
- Which of the following is not typically considered as a greenhouse gas?
 - methane
 - nitrogen
 - water vapour
 - carbon dioxide
- Which type of radiation is trapped by the greenhouse gases, contributing to the greenhouse effect?
 - ultraviolet radiation from the Sun
 - visible radiation reflected from the Earth
 - infrared radiation emitted from the Earth
 - microwave radiation from the Sun



9. All of these represent sources of methane in the atmosphere, *except*:
- ☒ (A) burning of fossil fuels ✓
 - (B) digestion in animals
 - (C) decomposition of plants in swamps
 - (D) all of the above are sources of methane
10. Long-term natural changes in Earth's climate over the past 400 000 years have most likely been caused by:
- (A) changes in the total amount of ice and water on Earth
 - ☒ (B) changes in Earth's orbit and in the angle of its rotational axis ✓
 - (C) a decrease in the number of animals on Earth
 - (D) a decrease in the amount of oxygen in Earth's atmosphere

Part B: True or False

Please answer on the SCANTRON

A = True

B = False

11. The greenhouse effect is only caused by humans. true (A) or false (B)? ✓
12. Chlorofluorocarbons (CFCs) are considered as greenhouse gases. true (A) or false (B)? ✓
13. Volcanic eruptions typically cause long-term changes in climate. true (A) or false (B)? ✓
14. The effects of climate change are more evident near the equator than near the poles of the Earth. true (A) or false (B)? ✓
15. Methane can trap infrared radiation much better than carbon dioxide. true (A) or false (B)? ✓
16. Greenhouse gases occupy more than 10% of all the gases in the atmosphere. true (A) or false (B)? ✓
17. Melting ice sheets and glaciers will cause the Earth to warm up even faster since less radiation is reflected back into space. true (A) or false (B)? ✓
18. Living things are part of the Earth's climate system. true (A) or false (B)? ✓
19. Soil and rock in the lithosphere has a high albedo. true (A) or false (B)? ✓
20. Climate change can lead to higher numbers of invasive species in ecosystems further from the equator. true (A) or false (B)?

**SUBJECTIVE SCORE
INSTRUCTOR USE ONLY**

100	90	80	70	60
50	40	30	20	10
9	8	7	6	5
4	3	2	1	0

PART 1

IMPORTANT

USE NO. 1 PENCIL ONLY

- MAKE DARK MARKS
- ERASE COMPLETELY TO CHANGE
- EXAMPLE: A B C D E

TO USE SUBJECTIVE SCORE FEATURE:
 • Mark total possible subjective points
 • Only one mark per line on key
 • 153 points maximum

100	90	80	70	60
50	40	30	20	10
9	8	7	6	5
4	3	2	1	0

NAME		Uni Lee	
SUBJECT	TEST NO.	Science	
DATE	PERIOD	June 14, 2013 2	

TEST RECORD	
PART 1	
PART 2	
TOTAL	

SCANTRON®

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KEY

(T) (F) % 2 3 5

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

19% + 1 = 100%