

Model of the Earth Quiz Review

1. Earth's troposphere, hydrosphere, and lithosphere contain relatively large amounts of which element?

(1) hydrogen	(3) iron
(2) potassium	(4) oxygen

2. As the altitude increases within Earth's mesosphere, air temperature generally

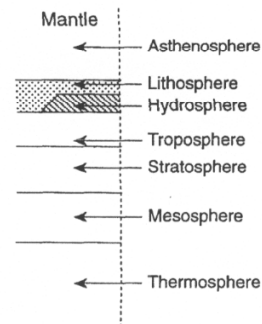
(1) decreases, only	(3) decreases, then increases
(2) increases, only	(4) increases, then decreases

3. Ozone is concentrated in Earth's atmosphere at an altitude of 20-35 km. Which atmospheric layer contains the greatest concentration of ozone?

(1) mesosphere	(3) troposphere
(2) thermosphere	(4) stratosphere

4. What do the tropopause, stratopause, and mesopause all have in common?
 - (1) Each is a boundary between two layers of the atmosphere.
 - (2) Each is a point of maximum temperature in its layer of the atmosphere.
 - (3) Each is a zone of decreasing water vapor content within the atmosphere.
 - (4) Each is a region of increasing pressure within the atmosphere.

The diagram below shows spheres associated with the Earth.



(Not drawn to scale)

5. Which spheres are zones of the Earth's atmosphere?

(1) asthenosphere, lithosphere, and hydrosphere	(3) lithosphere, hydrosphere, and troposphere
(2) hydrosphere, troposphere, and stratosphere	(4) stratosphere, mesosphere, and thermosphere

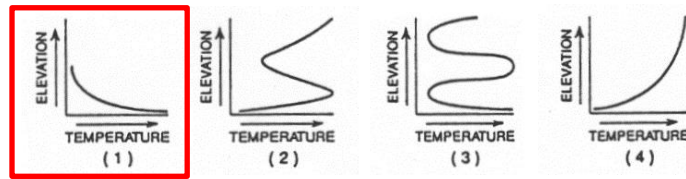
6. 11. What is the temperature of the atmosphere at the stratopause?

(1) -90°C	(3) 0°C
(2) -55°C	(4) 15°C

7. As the altitude increases from sea level to 11 km, the temperature usually

(1) decreases, only	(3) decreases, then increases
(2) increases, only	(4) increases, then decreases

8. Which graph best represents the relationship between air temperature and elevation in the troposphere?



9. The most abundant gas in the troposphere is

- (1) **nitrogen**
- (2) oxygen
- (3) carbon dioxide
- (4) water vapor

10. What is the average temperature at sea level?

- (1) **15°C**
- (2) 0°C
- (3) -55°C
- (4) -90°C

11. What is the approximate altitude of the mesopause?

- (1) 50 km
- (2) 66 km
- (3) **80 km**
- (4) 90 km

12. As the altitude within the troposphere increases, the amount of water vapor generally

- (1) **decreases, only**
- (2) increases, only
- (3) remains the same
- (4) decreases, then increases

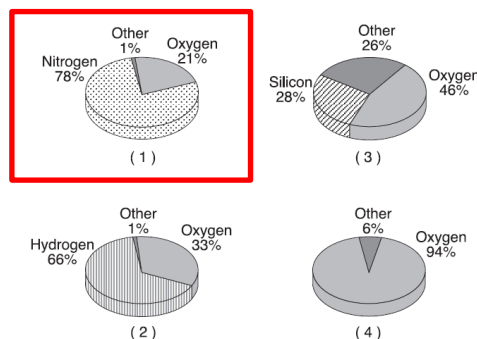
13. 99% of all weather occurs in the

- (1) stratosphere
- (2) thermosphere
- (3) **troposphere**
- (4) mesosphere

14. Chlorofluorocarbons have been linked to the destruction of

- (1) ozone which protects humans from the harmful infrared rays of the Sun
- (2) oxygen which is necessary for humans to breathe and survive
- (3) **ozone which protects humans from the harmful ultraviolet rays of the Sun**
- (4) carbon dioxide which absorbs infrared energy radiated by the Earth

15. Which pie graph correctly shows the percentage of elements by volume in Earth's troposphere?



16. What percentage of the troposphere is oxygen gas? **21%**

17. What are the 3 most abundant elements in the crust (by mass) in order of increasing abundance?

aluminum, silicon, oxygen (must be in this order – least → most)

18. What percentage of the crust consists of the element oxygen by volume? **94.04%**

19. What is the latitude and longitude of all the points indicated on the map? Make sure to include compass directions.

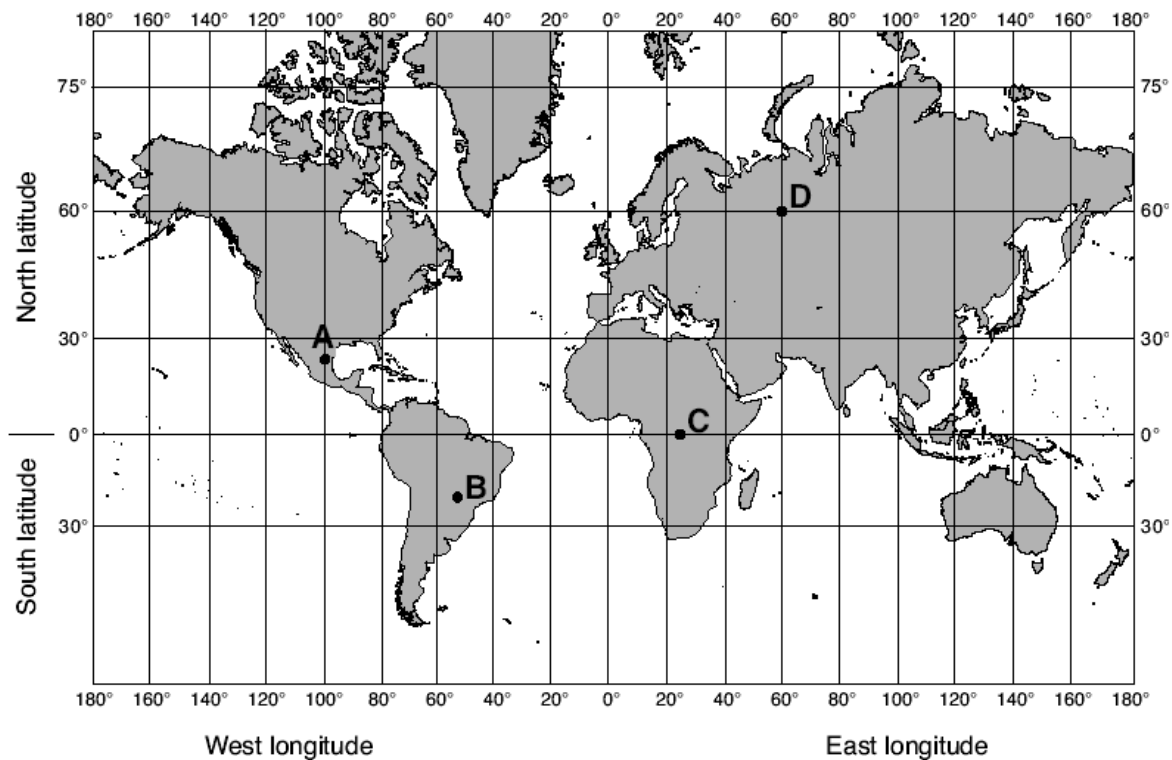
Try to be close to the answers listed below.

A **23° N, 100° W**

C **0° , 25° E**

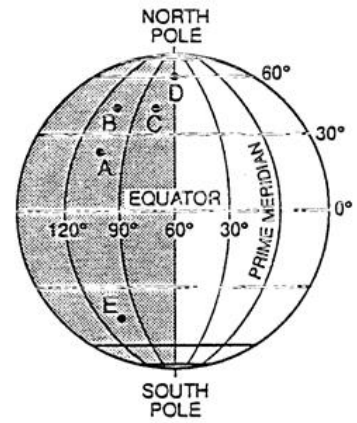
B **23° S, 53° W**

D **60° N, 60° E**



20. What are the approximate latitude and longitude of location A?

- (1) 105° N, 25° W
- (2) **25° N, 105° W**
- (3) 25° N, 105° E
- (4) 105° S, 25° E



Use the globe to the right to answer the remaining questions on this page.

21. What is the interval of the globe for latitude?

10°

22. What is the interval of the globe for longitude?

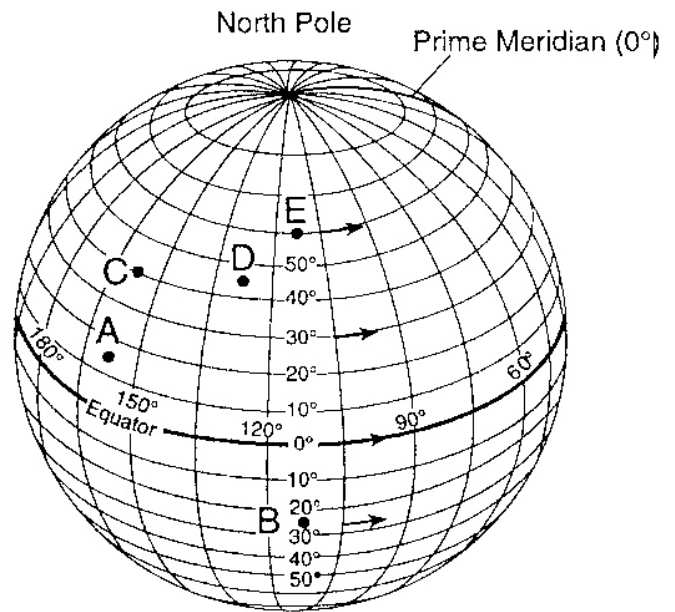
15°

23. What is the latitude of point C?

40°N

24. What is the latitude of point D?

45°N



25. What is the latitude and longitude of point A?

15°N , 157°W

26. Which lettered position is in the Southern Hemisphere? **B**

27. What is the latitude of the North Pole? **90°N**