

Earth Systems and Atmospheric Processes

Earth Science · Answer Key · 15 Questions

1. What is the primary cause of wind and ocean currents?

- A) Lunar gravity
- B) Uneven heating of the Earth**
- C) Rotation of the moon
- D) Volcanic activity

2. During the day, which area warms up faster, causing a sea breeze?

- A) The deep ocean
- B) The land surface**
- C) The polar ice caps
- D) The upper atmosphere

3. Which layer of the atmosphere contains the ozone layer?

- A) Troposphere
- B) Mesosphere
- C) Stratosphere**
- D) Exosphere

4. What is the 'albedo' effect?

- A) The absorption of heat by oceans
- B) The reflection of sunlight by a surface**
- C) The trapping of gases in the air
- D) The cooling of mountain slopes

5. Which of these is a greenhouse gas mentioned in the text?

- A) Nitrogen
- B) Argon
- C) Carbon Dioxide**
- D) Helium

6. What happens to temperature as altitude increases in the troposphere?

- A) It increases
- B) It decreases**
- C) It remains constant
- D) It fluctuates randomly

7. What is the main role of the ozone layer?

- A) To produce oxygen
- B) To block harmful UV radiation**
- C) To regulate ocean tides
- D) To increase global warming

8. Why is Venus hotter than Mercury despite being further from the sun?

- A) It has a much thicker atmosphere trapping heat**
- B) It is closer to the Earth
- C) It has more water
- D) It has higher volcanic activity

9. What does 'insolation' refer to?

- A) The cooling of the poles
- B) The amount of solar energy reaching the Earth's surface**
- C) The process of photosynthesis
- D) The melting of glaciers

10. Which sphere includes all living organisms and their habitats?

- A) Lithosphere
- B) Hydrosphere
- C) Biosphere**
- D) Atmosphere

11. What happens when the Arabian Sea experiences increased evaporation?

- A) Monsoon rainfall variability increases**
- B) Global temperatures decrease
- C) Glaciers grow faster
- D) Sea levels drop

12. What is the primary source of energy for the Earth's climate system?

- A) Geothermal heat
- B) The Moon
- C) The Sun**
- D) Tidal energy

13. Which surface reflects more sunlight?

- A) Black road
- B) Ocean
- C) Snow**
- D) Dark soil

14. What occurs when human activities increase greenhouse gases like CO₂?

- A) Global cooling
- B) Enhanced greenhouse effect and global warming**
- C) Increased ozone layer thickness
- D) Faster glacier formation

15. What do plants require from visible light to perform photosynthesis?

- A) X-rays
- B) Energy**
- C) Radio waves
- D) Gamma rays