

Conservation Geography

Week 4

Due Date :20.08.2025



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VISHVA S A

1) Which of these air masses is generally cool and moist?

- ☐ cP
- ☐ cT
- ☒ mP
- ☐ mT

The correct answer is: mP

Explanation:

The mP (maritime Polar) air mass is generally cool and moist because it forms over cold ocean waters in polar regions. As it moves inland, it brings cool temperatures and high humidity, which often leads to damp, cloudy weather and precipitation.

2) Which of these air masses is generally cold and dry?

- ☒ cP
- ☐ cT
- ☐ mP
- ☐ mT

The correct answer is: cP

Explanation:

The cP (continental Polar) air mass is generally cold and dry because it forms over large, high-latitude landmasses such as northern Canada, Eurasia, or Siberia. Its extended contact with cold surfaces causes the air to lose moisture and remain very stable, resulting in cold and dry conditions when it moves into other regions.

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3) The ISS orbits in which layer?

- ☐ Troposphere
- ☐ Stratosphere
- ☐ Mesosphere
- ☒ Thermosphere

The correct answer is: **Thermosphere.**

Explanation:

The International Space Station (ISS) orbits Earth at an altitude of approximately 400 kilometers (about 250 miles), which places it in the thermosphere layer of the atmosphere. The thermosphere extends roughly from 80 km to 700 km above the Earth's surface. This layer is very thin, with very few particles, and it is where the ISS experiences extreme temperature fluctuations while orbiting Earth. It is above the mesosphere and below the exosphere.

4) The government came up with a regulation that incandescent bulbs be replaced by LED bulbs, carbon dioxide from power plants is reduced. In the context of climate change, such an action would

- ☐ adaptation
- ☒ mitigation
- ☐ deceleration
- ☐ maladaptation

The correct answer is: **mitigation**

Explanation:

In climate change terminology:

Mitigation = Actions taken to reduce or prevent the emission of greenhouse gases, tackling the *cause* of climate change.

Example: Replacing incandescent bulbs with LED bulbs reduces electricity use, which decreases fossil fuel burning at power plants → lowers CO₂ emissions.

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5) Surplus seed and sperm banking is an adaptation option to facilitate

- ☐ resistance to climate changes
- ☒ resilience to climate changes
- ☐ response to climate changes
- ☐ none of these

The correct answer is: **resilience to climate changes**

Explanation:

Surplus seed and sperm banking preserves genetic diversity, allowing crops, livestock, and wildlife to be restored after losses caused by climate impacts. This strengthens the system's ability to recover and adapt, which is the essence of resilience.

6) The classical period for taking averages for climate is

- ☐ 10 years
- ☐ 20 years
- ☒ 30 years
- ☐ 40 years

The correct answer is: **30 years**

Explanation:

The World Meteorological Organization (WMO) defines the classical period for taking climate averages as a 30-year period. This duration is used because it smooths out short-term variations like yearly fluctuations and natural cycles such as El Niño, while still capturing longer-term climate trends. Examples include 1981 - 2010 and 1991 - 2020 periods, which serve as standard references for climate normals worldwide.



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7) Noctilucent clouds are present in which layer?

- ☐ Troposphere
- ☐ Stratosphere
- ☒ Mesosphere
- ☐ Thermosphere

The correct answer is: **Mesosphere**

Explanation:

Noctilucent clouds are the highest clouds in Earth's atmosphere, forming at an altitude of about 76 to 85 kilometers (47 to 53 miles). They consist of tiny ice crystals and occur



in the mesosphere, where temperatures are extremely low and water vapor can freeze at these high altitudes. These clouds are visible during twilight when

the Sun illuminates them from below the horizon while the lower atmosphere is in darkness.

8) Because of climate change, Mudumalai Tiger Reserve is suffering from frequent droughts. The management has built small water holes for animals, and fills them up regularly with tankers. In the context of climate change, such an action would be called

- ☒ adaptation
- ☐ mitigation
- ☐ deceleration
- ☐ maladaptation

The correct answer is: **adaptation**

Explanation:

In climate change, adaptation means taking steps to adjust to its effects and reduce harm.

Creating and maintaining artificial water holes in Mudumalai Tiger Reserve helps wildlife cope with frequent droughts directly addressing the *impact* of climate change rather than reducing its cause.

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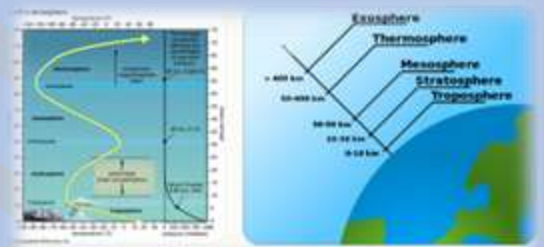
9) Which of these is home to the ozone layer?

- ☐ Troposphere
- ☒ Stratosphere
- ☐ Mesosphere
- ☐ Thermosphere

The correct answer is: **Stratosphere**

Explanation:

The ozone layer is primarily located in the stratosphere, between about 15 and 35 kilometers above the Earth's surface. It contains a high concentration of ozone molecules that absorb harmful ultraviolet (UV) radiation from the Sun, protecting life on Earth from damaging UV rays. This absorption also causes the temperature in the stratosphere to increase with altitude.



10) Most of the weather phenomena occur in

- ☒ Troposphere
- ☐ Stratosphere
- ☐ Mesosphere
- ☐ Thermosphere

The correct answer is: **Troposphere**

Explanation:

Most weather phenomena like rain, thunderstorms, clouds, and winds occur in the troposphere, the lowest layer of the atmosphere (up to ~8 - 18 km). This layer contains most of the atmosphere's water vapor and experiences rapid temperature changes, driving weather activity.



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