

APES TEST HINTS - Ch. 20-21 multiple choice

Study the notes! Some of those topics are not covered in the textbook.

Ch. 20 - atmosphere

- 1) **Anthropogenic**: Identify major sources of CH₄, N₂O, CO₂, CFCs
 - 2) Which country has the largest CO₂ emissions?
 - 3) **CFCs**: What are they? Why are they harmful to ozone?
 - 4) Chemical formulas (know what they are and their relevance to this chapter): **CO, CO₂, N₂O, NO₂, HNO₃, O₂, O₃** - check notes for more – see #24
 - 5) **Global temperature** rising: impacts
 - 6) **Greenhouse gases**: Describe how they work. Give examples.
 - 7) **HCFCs**: What are they? Why are they better than CFCs?
 - 8) **Hydrocarbons**: What are they? Give examples.
 - 9) **IR radiation**: How does it relate to the greenhouse effect?
 - 10) **Meteorology**
 - 11) **Milankovitch cycles**
 - 12) **Montreal Protocol**
 - 13) **Oceanic Conveyor**
 - 14) **Ozone**: Contrast **tropospheric** vs. **stratospheric ozone**. Where is the **ozone layer**?
 - 15) **Planetary albedo**
 - 16) **Precautionary Principle**
 - 17) **Stratosphere**
 - 18) **Troposphere**
 - 19) **UVB**: How does it affect O₂?
 - 20) **VOCs**
 - 21) **Weather** vs. **climate**
 - 22) **Wavelengths** of visible light vs. IR
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Ch. 21 – air pollution

- 23) **Acids**: examples and characteristics
- 24) **Bases**: examples and characteristics
- 25) **Catalytic converter**
- 26) Chemical formulas (know what they are and their relevance to this chapter): **NO_x, SO_x, N₂O, NO₂, SO₂, CO₂, CO, H₂SO₄, HNO₃, HC₂H₃O₂, OH⁻, OH^{*}, H⁺**
- 27) **CAA – Clean Air Act amendments of 1990**
- 28) **CO₂ emissions**: ways to reduce them
- 29) **Greenhouse effect**
- 30) **Halocarbons**
- 31) **Oxidative pollutant**: examples
- 32) **Hydroxyl radical**: What is its beneficial role in the atmosphere?
- 33) **pH**: What is the numerical range for **acids, bases, neutral**? What is the approximate pH for normal **precipitation**?
- 34) **smog**: **photochemical** vs. **industrial**
- 35) **SO₂ emissions**: ways to reduce them