

Name

Key

REVIEW ON ATMOSPHERIC SCIENCES

A. Matching-match the best definition to the following words.

- | | |
|-----------------------|--|
| <u>d</u> evaporation | <u>a</u> . thick, fleecy, puff balls |
| <u>h</u> conduction | <u>b</u> . thin, feathery |
| <u>b</u> cirrus | <u>g</u> . low sheets or layers |
| <u>j</u> hail | <u>d</u> . liquid to vapour |
| <u>i</u> convection | <u>e</u> . vapor to liquid |
| <u>a</u> cumulus | <u>f</u> . solid to gas |
| <u>e</u> condensation | <u>g</u> . travels as short and long waves through space |
| <u>K</u> sleet | <u>h</u> . heat transfer by contact |
| <u>C</u> stratus | <u>K</u> . heat transfer by circulation |
| <u>g</u> radiation | <u>j</u> . layered like an onion |
| | <u>k</u> . frozen rain |

Study your notes & questions too

B. Short Answer

- a) Draw a detailed diagram of the atmosphere's temperature layers. *see notes*
t, s, m, th
b) List the gases (and their percentages) found in the homosphere.
N 78%, O 21%, Ar 1%, CO₂ 0.03%, other
c) What is the basis for the temperature layer divisions?
the way T changes in the layer
- a) Explain how the ionosphere is formed.
UV rays knock e⁻ out of atoms
b) What do we use the ionosphere for?
bouncing radio waves to other places on ⊕
- What does the ozone layer do?
protect from/absorb UV rays (15-50 km up)
- Explain the greenhouse effect in detail.
short waves from sun absorbed into ground, emitted as long waves, trapped by H₂O vapour & CO₂
- warm air--> low air pressure
dry air--> high air pressure

Explain why one of the above statements is true.

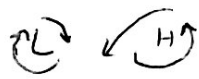
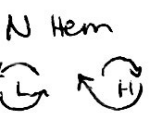
- Wind moves from high to low pressure
- What is an isobar? *line connecting pts of equal pressure*
- A steep pressure gradient--> strong winds.
(isobars close together)

7. Explain what causes the coriolis effect and what it causes.
rot. of ⊕ on axis *winds to veer*

8. If we had a non-rotating, land-free earth, what would the wind patterns look like?



9. Which direction do cyclones rotate in the N. Hemisphere? S. Hemisphere?
 Anticyclones in the N. Hemisphere? S. Hemisphere?
high *low* *S hem*



10. Briefly describe and sketch the hydrologic cycle (pg. 122).
(not on test)

11. What is an air mass? Give/describe 2 examples.
an area of the troposphere that has the same weather *cold maritime, continental, polar, tropical*

12. What is a front? What are the 3 kinds? Describe a cold front; a warm front.
division between air masses, cold, warm, stationary *thunderstorms steep slope* *cirrus: stratus gentle slope*

13. What does each of the following symbols mean when found on a weather map?

a) cold front

b) wind direc & speed

c) snow

d) isobars + high P region

e) stationary front

f) cloud type cirrus

g) cloud type stratus

h) warm front

pg 477 & 462

14. a) What are the differences between hurricanes and tornadoes?
funnel, damage where touches *bigger area - longer lasts*

b) What are 4 other names a hurricane is known as?
willie willie, bagious, cyclone, typhoon

c) What kind of pressure region is associated with hurricanes and tornadoes?
 So which way do they rotate in the northern hemisphere? southern hemisphere?
low *counterclockwise* *clockwise*

15. Define climate. Describe 3 of the main climate controls.
average weather of a region *proximity to oceans, latitude, topography*

altitude prevailing winds ocean currents

16. Explain how to determine how far away a thunderstorm is.
every 3s, thunder travels 1km

17. Identify the 3 cloud pictures being passed around.
stratus, cumulus, cirrus