

REVIEW

Chapter 7:

- Describe the origin of the Earth's waters, define the quantity of water that exists today, and list the locations of Earth's fresh water supply.
- Describe the heat properties of water, and identify the traits of its three phases: solid, liquid, and gas.
- Define humidity and the expressions of the relative humidity concept, and explain dew-point temperature and saturated conditions in the atmosphere.
- Define atmospheric stability and relate it to a parcel of air that is ascending or descending
- Illustrate three atmospheric conditions--unstable, conditionally unstable, and stable--with a simple graph that relates the environmental lapse rate to the dry adiabatic rate (DAR) and the moist adiabatic rate (MAR).
- Identify the requirements for cloud formation, and explain the major cloud classes and types, including fog.

Chapter 8:

- Describe air masses that affect North America and relate their qualities to source regions.
- Identify four types of atmospheric lifting mechanisms, and describe four principle examples.
- Analyze the pattern of orographic precipitation, and describe the link between this pattern and global topography.
- Describe the life cycle of a midlatitude cyclonic storm system, and relate this to its portrayal on weather maps.
- List the measurable elements that contribute to modern weather forecasting, and describe the technology and methods employed.
- Analyze various forms of violent weather and the characteristics of each, and review several examples of each from the text.

Chapter 9:

- Illustrate the hydrologic cycle with a simple sketch, and label it with definitions for each water pathway.
- Relate the importance of the water-budget concept to your understanding of the hydrologic cycle, water resources, and soil moisture for a specific location.
- Construct the water-balance equation as a way of accounting for the expenditures of water supply, and define each of the components in the equation and their specific operation.
- Describe the nature of groundwater, and define the elements of the groundwater environment.
- Identify critical aspects of freshwater supplies for the future, and cite specific issues related to sectors of use, regions and countries, and potential remedies for any shortfalls.

Chapter 10:

- Define climate and climatology, and explain the difference between climate and weather.
- Review the role of temperature, precipitation, air pressure, and air mass patterns used to establish climatic regions.
- Review the development of climate classification systems, and compare genetic and empirical systems as ways of classifying climate.
- Describe the principal climate classification categories other than deserts, and locate these regions on a world map.
- Explain the precipitation and moisture efficiency criteria used to determine the arid and semiarid climates, and locate them on a world map.
- Outline future climate patterns from forecasts presented, and explain the causes and potential consequences of climate change.

distribution of land and water on Earth?

fresh water is located where?

clouds

groundwater

ice caps and glaciers

the major rivers and lakes of the world.

The term deposition refers to what?

water freezing to ice

ice melting to water

water vapor freezing to ice

latent heat

Most of the precipitation and evaporation on Earth takes place where?

Relative humidity

Areas between 25° to 35° latitude usually become what?

Air on windward and leeward side of a mountain

vertical development clouds

What type of cloud that has a thin wispy appearance?

cP air mass

mT air mass

Summer afternoon thundershowers in the southeastern United States

convective lifting.

orographic lifting.

frontal lifting.

storm activity along a cold

occluded stage of a midlatitude cyclone

Hail

cloud types is associated with tornado development

Fujita scale

Galveston hurricane

hurricanes in the western Atlantic

when hurricanes move over

parts of a hurricane

Precipitation

hydrologic cycle includes water

percolation

infiltration

Transpiration

evaporation.

zone of aeration

zone of saturation

water table

aquiclude

aquifer

porosity

permeability

hygroscopic water

potentiometric surface

water table

artesian wells

"cone of depression"

Climate

With distance from the equator, how does climate change?

coastal areas located adjacent to cold ocean currents

"Hot and wet" temperature and precipitation patterns

Köppen classification system

The Amazon equatorial rain forest of South America climate

monsoon of South and Southeast Asia