

Study Guide GEOG 141 Where? What? Why?

Refer to all class notes, TEXT BOOK readings and diagrams

Chapter 5. Humidity – relative and specific Saturation

Creation of dew and frost. Dew point temperature Advection Fog, Scenarios for evaporation fog; radiation fog

Types of Cloud forms; Know where types of clouds are found (low, med high altitude or combination).

Air mass definition. Types of air masses (cT, cP mT cT) and be able to locate on a map.

Air mass modification (how and why air masses change character).

4 Mechanisms for atmospheric lifting; see Quiz. Be able to list and briefly explain ALL of them and give examples.

Stable air/Unstable air Tornadoes hurricanes, cyclone

Chapter 6 Hydrologic Cycle figure 6.4

Where is water in hydrologic cycle? How does the open system affect other open systems of the natural environment?

All Surface Water? What part is Fresh Water? Where is the fresh water?

Evaporation + Transpiration = Evapotranspiration

See Annual River runoff maps fig 6.16 DOES IT MAKE INTUITIVE SENSE?

Interaction of Surface and Groundwater fig 6.22

Groundwater pathways fig. 6.4 and 6.20

Water Infiltration Water Percolation fig. 6.5

Transpiration variances in Biomes (ie. Plant communities) stomata

Precipitation patterns in US (not numbers) 6.8 100th Meridian and what is the significance?

Hygroscopic water Gravitational water Capillary water fig. 6.11

Surface tension Field capacity Wilting point

Ground water Storage and terminology

Ground water map of US 6.19 watercourses, consolidated, unconsolidated aquifers

High Plains Aquifer /also known as Ogallala Aquifer- where what why is it important

Porosity p 190 Size and shape of aquifer material importance

Permeable p. 190 Impermeable p. 190

Zone of saturation Aquifer Water table

Aquiclude Confined aquifer Springs

Drafting and Recharge of aquifer Artesian well

Cone of depression Ground water mining confined aquifer

Sea water intrusion collapsing aquifer Desalinization

Effluent Conditions (gaining stream) Influent Conditions (losing stream)

Sectors of water usage by society = agriculture, domestic, industry. Since environmental movement natural waters for fish and plants are now being included.

Video: Cadillac Desert –Last Oasis 3

Chapter 7

Climate vs. weather

Climate classification 2 types: 1) Empirical 2) Genetic

Global climate patterns. Be able to explain WHY (genetic causes for climate types)

Climographs – what information is on them? Know distinctive characteristic and general locations of

Tropical Rain Forest climate Tropical monsoon Climate

Tropical Savannah Climate Humid Sub-tropical Climate

Mediterranean Climate Humid Continental Climate

Sub-Arctic Climates Desert Climates Steppe Climates

Understand the genetic reasons behind their location. See class notes.

You will be asked to match **Climographs** to climate types.

What do Biomes (largest classification of plant communities) have to do with climate?

MAP Questions: You will be asked to use genetic classification using **critical thinking** to determine conditions of particular locations on a map. I will offer students several location choices (**where**) and you will **write about one**.

Tell me (**what**) climate conditions are like, and **why (what is the cause)**. To do this review 1) *ocean basin*

currents 2)wind directions, 3) types of air masses, continental or marine, polar or tropical 4) Latitude including ITCZ /STH bands 5) cloud cover 6), seasonality; seasonal patterns such as 4 distinct seasons or wet dry seasons (why) 7) topography , rain shadow concepts 9),proximity to oceans and other pertinent information from Ch 2-7 that will help answer this question. **I give more points for critical thinking and using/explaining concepts in your writing about WHY. Not important to “name” the climate type here.** See figure 7.1 and what we have studied in those chapters and how it relates to the climate map on 7.2

Global Climate Change see figures 7.23; 7.25; 7.26; 7.27

To be discussed next week before exam.

Part IV Ecosystems and Biomes

Ecosystems Chapter 15 pp. 473-485

Terminology:

Ecosystem	Ecology	Biogeography
Net Primary Productivity	Biomass	Food Web

Understand basic info (not numbers) of Net Primary Production with the ecosystems pp. 479.

Understand basic elevation and latitudinal influences 15.8

Understand basic temp/precipitation influences fig 15.7

Oxygen/carbon Cycle **fig 15.9** Fixing and Releasing mechanisms/parts of the cycle

Nitrogen Cycle **fig 15.10** trace from atmosphere to plants and biomass.

Chapter 16 Terrestrial Biomes 504-509

Terminology

Biome	Ecotone	Biodiversity	Native Species
Non-Native Species	Invasive species	disruption of plant communities.	

Read page 505 bottom paragraph through column 1 on page 506.

Review table and map of 16.1 and 16.3. Be able to discuss the relationship of climate and vegetation and human impact.

Question: What may happen to the terrestrial Biomes when we experience climate change.