

Study Guide GEOG 141 Where? What? Why? if applicable

Refer to all class notes, lecture materials and diagrams

Chapter 5- Know what latent heat is?? How does it work in the atmosphere and the hydrosphere? Phase Change; energy exchange Sublimation, Evaporation, Condensation

Distribution of water: ocean vs freshwater; surface water vs groundwater; storage (not Percent but general understanding of high amount of storage v low amounts held in Hydrologic cycle.

Relative Humidity Specific Humidity

Saturation Dew point and how dew is formed on grass or wind-shield of a car

Atmospheric Lifting - 4 mechanisms –be able to explain.

Elevation and precip Wind-ward and Lee-side of mountains. Rain shadow

3 basic Forms of Clouds and characteristics such as altitude, shape, etc. Nimbus

Tornados – Where? Why? What characteristics? Hail formation

Hurricanes characteristics of North Atlantic basin

Air mass = parcels of air with... see class notes

Marine air mass properties and origin of tropical and polar

Continental air mass properties and origins of tropical and polar and arctic

Air mass modification how it works .

Location of mountain range locations from study sheet from map quiz2

Chapter 6 Hydrologic Cycle fig 6.04 –

Surface Water and Groundwater pathways (model)

Runoff - Overland Flow, Stream Flow, See Annual River runoff maps p. 198

Vocab and importance of each: Infiltration Percolation

Evaporation Transpiration – evapotranspiration

Stomata Surface tension and water

Transpiration patterns in general with vegetation types

Precipitation **patterns** in US (not numbers)

Hydrologic Storage- residence time. Residence time is the time that it stays in that type of storage. For example, glaciers =thousands of years vs. atmosphere days and hours etc.)

general ranking, not numbers Residence time is the time that it stays in that type of storage.

Hygroscopic water Gravity water Capillary water

Field capacity wilting point

Groundwater Storage and terminology p. 202 fig. 6.20

Ground water movement map 207

Porosity - Permeable

Zone of saturation Aquifer Cone of depression

Water table Aquiclude/impermeable Confined aquifer

Artesian well Recharge of aquifer Water Drafting

Ground water mining- p.202 What are the conditions to qualify use of the term?

Ground subsidence

Relationship of groundwater and surface water Effluent Conditions (gaining GW to the stream flow v.s. Influent Conditions (losing stream flow to GW)

Video questions from Cadillac Desert part 3.

Map pg 200 and aquifer types in US (consolidated, unconsolidated and watercourse aquifers, High Plains Aquifer. 100th Meridian and the importance of that demarcation?

Desalinization... Where is it happening in the US?

Sectors of water usage by society: Agriculture, Domestic, Industrial: last 30 years brought realization of the need for the natural environment.

Chapter 7

Climate vs. weather

Climate classification 2 types: 1) Empirical 2) Genetic

Climographs – what information is on them? Know General 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.

You WILL be asked to recognize **Climographs** from several of these regions.

How does the biosphere relate to climate? What is a biome? I will cover more of this next week.

MAP Questions: Location of mountain range from map study for quiz2.

AND

You will be asked to use **genetic classification** using **critical thinking** to determine climate types of particular locations on a map. I will offer several location **choices** and you will **write about one or two**. Tell me (**what**) climate conditions are like and (**why; because**) they are so. To do this review latitude *ocean basin currents, wind directions, types of air masses, ITCZ location and circulation, Subtropical high locations and movements, seasons, mountain ranges (topography you know), cloud cover, Temperature seasonal variations and precipitation patterns, rain shadow concepts* and other pertinent information from Ch 2-7 that will help answer this question. **I give points for critical thinking and understanding of concepts. Remembering a “name” of a climate type does not impress me.**

You will use **general language** rather than numbers. Such as: this area **gets high precipitation**. Followed by **specific reason** for the rainfall ... **Examples:** because it is influenced by the ITCZ.....or Its on a coastline receiving warm marine air masses pushed in by the Trade Winds..... or its on the windward side of the mountain range..... or lee-side of a mountain range .

Also be specific to **season** if it applies. All year? How many seasons? Why?

Examples: This place has severe cold, frozen, dark dry winters and moderate warm short summers **because** its far from the equator and is covered by Polar Continental air masses most of the year due to it location far from oceans that are free of ice..... This place has summer seasonal rains with a distinctive dry season in fall and winter **because**..... This place has four distinct seasons **because**...

prevailing **winds**

types air masses

latitude

cloud cover

elevation

topography

proximity to ocean

Latitude