

## **Earth Science Lecture -Review for Test 2**

### **Oceanography** (Lab 6; Chps. 14-15)

Terms: salinity, gyres, Gulf Stream, West/East Wind Drift, Surface Zone, Transition Zone, Deep Zone, Salinity, Thermocline, ENSO, El Nino, La Nina, Density, Upwelling

- know the basic composition of sea water
- how can the salinity of sea water be changed? (by precipitation; evaporation; runoff; etc)
- know the major Atlantic and Pacific gyres and their direction of movement
- know how ocean currents affect the climates of certain portions of the earth
- what is ENSO and how can it affect weather in Texas and elsewhere around the world
- what are the layers of the ocean

### **Atmospheric Sciences Part 1** (Lab 7; Chp 16)

Terms: troposphere, stratosphere, ionosphere, ozone, Ozone Layer, Greenhouse Effect, Electromagnetic Spectrum, UV light, visible light, infrared light, seasons, solstice, equinox, axial tilt

- what is the composition of the atmosphere?
- what is the structure (layering) in the atmosphere and how is it determined?
- what is the electromagnetic spectrum? What types of light does the earth emit? The sun?
- how the Greenhouse Effect works
- what is ozone depletion and why is it a major environmental problem
- what causes the seasons and when do they occur?

### **Atmospheric Sciences Part 2** (Lab 7, 8; Chp 17-19; Planetarium Shows)

Terms: relative humidity, water vapor content, water vapor capacity, dew point temperature, atmospheric pressure, high pressure, low pressure, orographic lifting, frontal wedging, convergence; Hadley Cell, Ferrel Cell, Polar Cell, ITCZ, NE Trade Winds, Subtropical High, Westerlies, Polar Front, Polar Easterlies, cyclone; anti-cyclone

- know how relative humidity is calculated; what is dew point temperature?
- know in detail the characteristics of a low and high pressure system
- know the different types of precipitation
- what conditions causes air to reach its dew point temperature
- know the processes that causes air to raise
- know the three different atmospheric circulation cells
- know the different features (winds and low/high) pressure systems of the earth's atmosphere (specifically know what latitude each feature occurs at)

### **Atmospheric Sciences Part 3** (Lab 7, 8; Chp 17-19; Planetarium Shows)

Terms: Mid-latitude cyclone, warm front, cold front, Tropical Storm, Hurricane, Spiral Rain Band, Central Eye, Eye Wall

- what are the four weather makers in South Texas
- what is a mid-latitude cyclone; be able to identify the three main components of this storm system. Where do these storms occur?
- how does the weather around a mid-latitude cyclone vary specifically?
- what is a hurricane; be able to identify the three main components of this storm system. Where do these storms occur?
- what are the conditions associated with hurricane formation
- precisely what is the difference between a hurricane and a tropical storm
- what happens to a hurricane once it makes landfall