

Study Guide for Exam 2

Chapter 6 Water and Ocean Structure

- 1) The bonding of the water molecule
- 2) Water and the Latent Heat of Fusion
- 3) Water and the Latent Heat of Vaporization
- 4) Density Zones of the ocean and pycnoclines

Chapter 7 Seawater Chemistry

- 1) Water as a universal solvent
- 2) Water's Colligative Properties
- 3) Dissolved Gases in the Ocean

Chapter 8 Circulation of the Atmosphere

- 1) Composition of the atmosphere
- 2) Coriolis Effect
- 3) Global Wind Circulation
- 4) Global Pressure Systems
- 5) Air Masses
- 6) Storm Fronts

Chapter 9 Circulation of the Ocean

- 1) Ekman Transport
- 2) Geostrophic Gyres
 - a) Western Boundary Currents
 - b) Eastern Boundary Currents
 - c) Transverse Currents
- 3) Monsoonal and High Latitude Currents
- 4) Upwelling and Downwelling
- 5) ENSO
- 6) Common Water Masses

Chapter 10 Waves

- 1) Parts of the Wave
- 2) Classifying Waves
- 3) Types of Waves
- 4) Factors that affect wind wave development
- 5) Plunging and Spilling Waves
- 6) Seiches, Storm Surges, Tsunamis and Seismic Sea Wave

Chapter 11 Tides

- 1) Newton's Equilibrium Theory
- 2) LaPlace Equations and Dynamic Theory
- 3) Sun and Moon's Influence on the Tides
- 4) Types of Tides
- 5) Amphidromic Circulation

Chapter 12 Coasts

- 1) Erosional Coasts
- 2) Depositional Coasts
- 3) Coasts Formed by Biological Activity
- 4) Estuaries
- 5) Characteristics of US Coasts

I will ask you seven or eight essay questions from this list of topics. You will be only required to answer five of those questions. There will also be a bonus question. The essay section of the test is worth 50 points. The multiple choice part of the exam is also worth 50 points.