Marine Science FINAL Study Guide (all multiple choice)  
**Unit 1**

1. Define the following terms: Autotroph, Heterotroph
2. Define/describe the following terms: Atmosphere, geosphere, hydrosphere, lithosphere
3. What happens with pressure as you go deeper in the ocean?
4. What are the levels of a marine food web? Give an example of an organism that would be found at each trophic level.
5. How much energy is transferred up a food web?
6. What is a thermohaline current? What two factors affect density?
7. What is density stratification? Where is the densest water? The least dense?
8. How old is the ocean?
9. What are the levels of classification?
10. What are the pelagic zones in order from top (shallow) to bottom (deep)?
11. What type of molecule is water?
12. What % of water is found in the ocean?

**Unit 2**

1. What is an arthropod? Give some examples.
2. What is an estuary? Why are estuaries important? List several reasons
3. What is an exoskeleton? What makes up an arthropod’s exoskeleton?
4. What are some ways that can cause an increase in salinity in an estuary? A decrease?
5. What does “arthropod” actually mean?

**Unit 3**

1. What is the Coriolis Effect?
2. Describe the motion of a single water particle as a wave moves through
3. What is a current? How do the major surface currents rotate in the Northern Hemisphere? The Southern Hemispehre?
4. Draw and label a wave with the following terms: crest, trough, amplitude, wavelength

**Unit 4**

1. Describe the two body forms of a Cnidarian.
2. What is a gastropod? What does “gastropod” mean? Give some examples.
3. What is a bivalve? Give some examples.
4. What organisms make up the phylum *Porifera?*
5. What organisms make up the phylum *Annelida?*
6. Describe the cephalopods. What are some examples?

**Unit 5**

1. What are some examples of echinoderms?
2. What is the side that contains the mouth called?
3. What is the side that contains the anus and madreporite called?
4. How do sea urchins move?
5. What are tides? What causes tides?
6. Do the “bulgy” areas have high or low tides?
7. What is a spring tide? What is a neap tide?
8. What makes the intertidal zone such a harsh environment?

**Unit 6**

1. What organism makes up coral reefs? How is coral classified? (living/nonliving, animal or plant)
2. What other ecosystem is compared to a coral reef?
3. Why do corals bleach themselves?
4. Define commensalism, parasitism and mutualism. Give an example of each.
5. Where are corals located?

**Unit 7**

1. Describe and draw a divergent boundary, a convergent boundary, and a transform boundary.
2. What is Subduction?
3. What causes the movement of Earth’s plates?
4. What is bathymetry?
5. What is the theory of plate tectonics?
6. Where is new sea floor formed? Where is old sea floor found?
7. What is the most common coloration pattern of fish in the epipelagic zone?
8. What is chemosynthesis?
9. What is bioluminescence?

**Unit 8**

1. Describe the 3 classes of fish. Give examples of each.
2. What are gills? What are the used for?
3. Where does the oxygen fish breath come from?
4. What is the function of the swim bladder?
5. What is the lateral line? What is its function?
6. What is the operculum in fish used for?
7. Describe the 4 body forms (fusiform, compressed, depressed, attenuated) of fish.
8. What are the 4 orders of reptiles?
9. What does ovoviviparous mean?
10. What’s the difference between shorebirds and seabirds?

**Unit 9**

1. What are some characteristics of mammals?
2. What animals fall into the following groups: pinnipeds? Cetaceans? Sirenians? Order *Carnivora?*
3. Where are manatees found?
4. What is echolocation used for in whales & dolphins?
5. What are some examples of marine mammals?

**Dissection Stuff**

1. Label the dorsal, ventral, anterior and posterior sides on a diagram of a fish.
2. What is an open circulatory system? A closed circulatory system?
3. What’s the difference between tentacles and arms?
4. What is the mantle? Where is it located on a squid?