

## **Review for Marine Science Final Exam (Garrison Chapters 12-18)**

- Review coasts: depositional and erosional and features found at each
  - Review the requirements for life; and evolution
  - Review food webs
  - Review biogeochemical cycles
  - Review the differences between heterotrophs and autotrophs; different levels of consumers
  - Review the lifestyles (plankton, nekton, neuston, benthic) and zones of the ocean including pelagic, benthic, abyssal, neritic and intertidal
  - Review the plankton including zooplankton, phytoplankton, meroplankton, holoplankton
  - Review the neuston, and the differences between pelagic and benthic animals
  - Review food pyramids and energy flow through living systems
- 
- Review the Linnaeus classification system (including why scientists classify organisms and the Six kingdom system and the Three-domain system).
  - Compare prokaryotic and eukaryotic cells
  - Define algae, review the algae phyla and why kelp is important and where it is found
  - Review the difference between submergent and emergent plants and examples of each
  - Review benefits of plants to various marine ecosystems
  - Review the invertebrate phyla Cnidaria, Mollusca (gastropods and cephalopods), Arthropoda, Echinodermata – what animals are in each of these phyla?
  - Review the crustacea including krill, copepods, decapods
  - Review the phylum Chordata including the classes Chondrichthyes and Osteichthyes; mammals pinnipeds and cetaceans
- 
- Review the terms ecosystem (abiotic and biotic factors), habitat, population, community and niche
- 
- Review the Earth's natural resources
  - Compare renewable and non-renewable resources found in or below the oceans
  - Compare biological and physical resources
  - Review the International Whaling Commission (IWC) moratorium and exemptions
  - Review the trend in aquaculture
  - Review Maximum Sustainable Yield (MSY) and over fishing
- 
- Review the greenhouse effect, greenhouse gasses and the theory of global warming (including cause and effect, human influences, ocean influences)
  - Review habitat destruction of estuaries and coral reefs
  - Review how non-native species affect ecosystems and how they are transferred (introduced)
  - Review sources and types of pollution
  - Review heavy metals such as lead, mercury, cadmium and how they affect organisms
  - Review causes and effects of eutrophication