Oceanography
Chapters 17 and 18, Learning Objectives and Study Questions

1. *Describe what you would look for to determine which of the two classes of whales an individual animal belongs to, and give an example of a species of whale that belongs to each class.*

2. *Identify a variety of common marine mammals, reptiles and birds and, for turtles and birds in particular, explain what aspect of their behavior makes them so vulnerable to threat by humans.*

3. *Describe what you would look for to determine which of the two classes of fish an individual animal belongs to, and give an example of a species that belongs to each class.*

4. *Cite two adaptations that are common to demersal shallow-water fish, and briefly explain the survival value of each.*

5. *Cite two adaptations that are common to free-swimming deep-sea fish, and briefly explain the survival value of each.*

1. *Determine whether a sample of marine algae typically lives in shallow, intermediate, or deep water environments and explain what criterion you used to make your determination.*

2. *Describe where you would expect to find any of several organisms common to rocky shorelines based on their abilities to tolerate the different amounts of dessication, pounding by the surf, and water temperature fluctuations that are typical of different shoreface environments.*

3. *Indicate whether communities of infaunal organisms are generally richer in coarse (sandy) or fine-grained (muddy) sediments and discuss the likely reason for this difference.*

4. *Sketch a cross-section of a typical coral reef, being sure to indicate where the reef is actually alive. Briefly explain how you could tell which side faces the open ocean from your drawing, and why most modern reefs are restricted to shallow tropical waters.*

1. *Baleen whales feed themselves by _____.*
   A. chomping other animals
   B. ingesting seafloor sediment
   C. straining zooplankton from the water
   D. grazing on coral reefs
   E. singing the blues

2. *Among marine animals, seabirds and turtles are particularly vulnerable to threats by humans because they _____.*
   A. compete with us for fish
   B. are very slow moving
   C. are very susceptible to toxins
   D. nest on beaches and coastal cliffs
   E. make great soup

3. *Sharks, skates, and rays are all _____ fish.*
   A. bony
   B. cartilaginous
   C. delicious
4. Flattened bodies and upward-facing eyes are typical adaptations of ____ fish.
   A. anadromous
   B. cartilaginous
   C. catadromous
   D. demersal
   E. yummy

5. Bioluminescent organs and bodies that are rich in water and poor in protein are typical of _____.
   A. deep-sea bony fish
   B. electric eels
   C. skates and rays
   D. squid
   E. trolls

6. Because of the pigments that enable them to absorb the feeble light that reaches the, the deepest algae are _____.
   A. black
   B. blue
   C. brown
   D. green
   E. red

7. Organisms like anemones that need to avoid dessication and filter feed from relatively clear water are likely to be found along rocky shores:
   A. above the high tide line
   B. right at the high tide line
   C. between the high and low tide lines
   D. right at the low tide line
   E. below the low tide line

8. Infaunal communities are typically richer in coarser substrates because these materials are:
   A. easier to dig in
   B. better oxygenated
   C. more supportive
   D. more variably colored
   E. tastier to sediment feeders

9. The coarsest sediments on a coral reef are typically found ____.
   A. on the floor of its lagoon
   B. on its crest
   C. on its outer slope
   D. on its reef flat
   E. after it’s too late
10. Deep-sea communities of worms, mussels, and crabs feed on _____ around mid-ocean ridge hot springs and cold seeps.
   A. chemosynthetic bacteria  
   B. gas hydrates  
   C. methane  
   D. metal sulfides  
   E. discarded fast food