

Oceanography Section 5-5 Questions

Multiple Choice

Identify the choice that best completes the statement or answers the question.

- _____ 1. The thermocline in the ocean
- Is a temporary feature in the tropics and subtropics.
 - Is a zone of rapid increase in temperature with depth.
 - Reflects not only a change in temperature, but also a change in density.
 - Parallels the isotherms and trends north to south.
- _____ 2. The halocline in the ocean
- Is a zone of rapid decrease in salinity with depth in the subtropics.
 - Is likely to exist wherever evaporation and precipitation are equal.
 - Is prevalent in the subpolar and polar regions.
 - Is unrelated to water density.
- _____ 3. All of the following are true about the pycnocline in the ocean *except*
- Density of water is a function of temperature, pressure, and salinity.
 - It is a zone of rapid change in density that could represent the thermocline or the halocline.
 - Depending on conditions, density could be increasing or decreasing with depth in the pycnocline.
 - It separates the surface layer from the deep layer.
 - Although temperature and salinity can increase or decrease with depth, density always increases with depth in the ocean.
- _____ 4. In the basic oceanic stratification,;
- The surface layer is small in volume and extends from polar region to polar region.
 - The pycnocline is second in volume and extends poleward beyond the surface layer's end.
 - The deep zone is the largest layer and extends to the surface in some polar regions.
 - In the winter the stratification gradually vanishes from the equator to the pole.

Completion

Complete each statement.

5. Water stratification in the ocean results from density differences. The uppermost layer is the least dense and the lowermost layer is the most dense. These two layers are separated by a layer, called the _____, in which density changes rapidly with depth. In some areas this rapid change in density is temperature related. The transition zone marked by a rapid temperature change is called a _____, but in others it is marked by a rapid change in salinity and is called a _____.