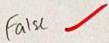8/8

Name Arjun Raghavan
Section IN TA Yang

Lab 5A Quiz: Physical and Chemical Properties of Seawater

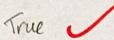EPSS 15 Introduction to Oceanography – Spring 2019

1. (3 Points) There are 4.2×10^{21} g of sulfate (SO_4^{2-}) dissolved in the ocean, and the river flux of sulfate into the ocean is 3.6×10^{13} g/yr. What is the residence time (t_r) of sulfate in the ocean?

$$= \frac{4.2 \cdot 10^{21}}{3.6 \cdot 10^{13}} = \frac{4.2}{3.6} \cdot 10^{8} \approx 1.17 \cdot 10^{8} \ yr$$

2. (1 Point) True or False: Water is unique for its low heat capacity.

False ✓

3. (1 Point) True or False: The density of seawater decreases when temperature increases.

True ✓

4. (1 Point) What is the typical pH of seawater?

$\sim 7.4 - 8.5$ pH ✓

5. (2 Points) State whether seawater salinity increases or decreases in response to each of the following processes:

Evaporation	increases
Precipitation	decreases
Melting	decreases
Freezing	increases