

- _____ 1. The global ocean covers approximately _____% of the Earth's surface.
- _____ 2. What is the primary source of energy driving circulation of water in the Earth's hydrosphere?
- _____ 3. The substance being dissolved is referred to as the _____.
- _____ 4. The substance doing the dissolving is called the _____.
- _____ 5. "True or False: water is a monopolar molecule, which makes it a very good solvent."
- _____ 6. The measurement of the quantity of solute in a given quantity of solution is termed _____
- _____ 7. Calculate the mass percent of sodium chloride in a solution in which 10 grams of NaCl is dissolved in 190 grams of water.
- _____ 8. True or False: warm water is less dense than cold water due to volume and density changes.
- _____ 9. "True or False: the difference between ice, liquid, and water vapor is one of temperature and molecular kinetic energy."
- _____ 10. The transfer of water from the oceans to the atmosphere to the surface of the Earth and back to the oceans is referred to as the _____ cycle.
- _____ 11. Density-driven vertical circulation of ocean water due to salinity and temperature contrasts is referred to as Answer circulation.
- _____ 12. A metal block has a mass of 5000 kg and a volume of 2 cubic meters. What is the block's density?
A) 1000 kg/m³ B) 2500 kg/m³ C) 5000 kg/m³ D) 10,000 kg/m³ E) none of these
- _____ 13. In an ocean system, an increase of water temperature will most likely result in strong down-welling currents, carrying water to the ocean floor. A. True B. False
- _____ 14. Heat transfer with a transfer of mass (e.g. movement of air or water) is referred to as _____.
- _____ 15. True or False: the bond angle between hydrogen atoms and oxygen in the water molecule is 105°
- _____ 16. The global ocean covers approximately _____% of the Earth's surface (use only numeric answers).
- _____ 17. Given that the weight density of water is 62.4 lb/cu. ft, and that there are 7.48 gallons in 1 cubic foot, how much does 100 gallons of water weigh?
18. The density of a material increases with increasing temperature, due to volume expansion relative to its mass.
A. True B. False
19. Heat transfer in the ocean and atmosphere is primarily by which of the following processes:
A. Radiation B. Convection C. Reflection D. Refraction E. None of the above
20. A metal block has a density of 500 kg per cubic meter and a volume of 3 cubic meters. What is the block's mass?
A) 1000 kg B) 1500 kg C) 5000 kg D) 10,000 kg E) none of these
21. 100 grams of sodium chloride dissolved in 1 Kg of water results in a concentration of 1000 parts per thousand. A. True B. False
- _____ 22. List the three mechanisms of heat transfer, in alphabetical order.

- _____ 23. Given that 1 km = 1000 m, 1 m = 3.28 ft, and that 1 mile = 5280 ft; how many meters are contained in 10.3 miles? SHOW ALL OF YOUR UNIT ALGEBRA.
- _____ 24. In the space provided at left, draw a diagram of the water molecule, include the bond angle.