



Physics Acknowledgment Form

Review questions

1. Pressure is force acting on a unit area. True False
2. Atmospheric pressure at sea level is _____.
3. Atmospheric pressure _____ with altitude above sea level.
 - a. Increases
 - b. Decreases
4. Altitude diving begins at _____ft. above sea level.
5. Pressure increases by one atmosphere every _____ feet of depth of sea water
6. 1 ATM of hydrostatic pressure is reached every _____ feet in saltwater.
7. 1ATM = _____psi
8. Absolute pressure = atmospheric pressure + hydrostatic pressure. True False
9. The total pressure of a mixture of gases is equal to the sum of partial pressures of each gas in the mixture. TRUE FALSE
10. Density = weight /volume True False
11. Saltwater is _____ dense than fresh water. MORE LESS
12. Objects in Freshwater are _____buoyant than objects in Saltwater
MORE LESS
13. Atmospheric air is composed of what gases:
 - a. 78% _____; 21% _____; 1% Other gases
14. Which grades of oxygen are suitable for diving?
 - a. Aviation
 - b. Medical
 - c. Technical
 - d. A and B
 - e. A, B and C

15. What gas plays a major role in decompression and narcosis? _____

16. 1 meter = 3.28 feet. 5 meters = _____ feet

17. 1 kilogram = 2.2 pounds 7 kilograms = _____ pounds

Questions 18-20, Match the choice with the definition:

- a. Neutrally Buoyant
- b. Positively buoyant
- c. Negatively buoyant

18. The weight of the displaced fluid is greater than the submerged object. _____

19. The weight of the displaced fluid is less than the submerged object. _____

20. The weight of the displaced fluid is equal to the weight of the fluid displaced. _____

Questions 21-25 identify the gas law with following name:

- A - BOYLES LAW
- B - CHARLES' LAW
- C - HENRY'S LAW
- D - DALTON'S LAW
- E - ARCHIMEDES' PRINCIPLE

21. "Any object wholly or partly immersed in a fluid is buoyed up by a force equal to the weight of the fluid displaced by the object." _____

22. "For any gas at a constant temperature the volume of the gas will vary inversely with the pressure." _____

23. "For any gas a constant pressure the volume of the gas will vary directly with the absolute temperature or with any gas at a constant volume, the pressure of the gas will vary directly with the absolute temperature." _____

24. "The amount of any given gas that will dissolve in a liquid at a given temperature is proportional to the partial pressure of that gas in equilibrium with the liquid and the solubility coefficient of the gas in the particular liquid." _____

25. "The total pressure exerted by a mixture of gases is equal to the sum of the pressures of each of the different gases making up the mixture, with each gas acting as if it alone was present and occupied the total volume." _____

Questions 26-30: Fill in the blanks with the appropriate number.

	Depth	Volume	Pressure	Density
26.	0'	1	1 ATM	
27.	33'	1/2		2
28.	66'		3 ATM	3
29.	99'	1/4	4 ATM	
30.	132'	1/5		5

31. A scuba tank that lasts 60 minutes on the surface will last _____ minutes at 33 feet.

32. Too much moisture in breathing gas can increase breathing resistance. TRUE FALSE

33. Underwater, objects appear 25% _____. LARGER SMALLER

34. _____ is the first wavelength (color) of light to be absorbed by water.

35. During descent, the buoyancy of your wetsuit:

- a. Increases
- b. Decreases
- c. Stays the same
- d. May increase or decrease depending on the salinity

36. The speed of sound in water:

- a. Is the same as it is in air
- b. Is faster than it is in the air
- c. Is slower than it is in the air

I have watched the Physics PowerPoint. _____ Initial

I have had explained and understand any of the questions that I missed or did not understand. _____ Initial

Signature

Date

Print Name