

- 11 * Which of the following choices expresses the correct arrangement for the solubility rate of oxygen gas in some water bodies?
- (a) Fresh water at 20°C > salt water at 20°C > salt water at 5°C
 - (b) Salt water at 20°C > salt water at 5°C > fresh water at 20°C
 - (c) Fresh water at 5°C > salt water at 5°C > salt water at 20°C
 - (d) Salt water at 20°C > fresh water at 20°C > salt water at 5°C

Oxygen gas (O₂)

- 12 All of the following are considered a source of dissolved oxygen in water, except
- (a) algae
 - (b) phytoplankton
 - (c) atmospheric air
 - (d) zooplankton
- 13 Which of the following represents two opposite processes?
- (a) Photosynthesis and cellular respiration.
 - (b) Cellular respiration and acidification.
 - (c) Calcification and cellular respiration.
 - (d) Acidification and photosynthesis.
- 14 What is the main source of the energy required for marine organisms to carry out their biological processes?
- (a) O₂ gas.
 - (b) CO₂ gas.
 - (c) Glucose.
 - (d) Calcium carbonate.
- 15 Which of the following does its increase lead to the increase of the percentage of dissolved oxygen in water?
- (a) The temperature of water.
 - (b) The concentration of salts in water.
 - (c) Air pollutants.
 - (d) Photosynthesis process.
- 16 What is the effect of increasing the concentration of dissolved oxygen in water?
- (a) It helps in completing the photosynthesis process.
 - (b) It supports the growth of aquatic plants and fish.
 - (c) It reduces the pH value of water.
 - (d) It increases the strength of water currents and waves.
- 17 All of the following support the balance of aquatic ecosystem, except
- (a) the increase of the percentage of dissolved oxygen in water
 - (b) the diversity of the aquatic organisms
 - (c) the increase of photosynthesis rate
 - (d) the extreme increase of water temperature
- 18 What is the effect of increasing the level of dissolved oxygen in water on the efficiency of the respiration process in living organisms?
- (a) It has no effect.
 - (b) It reduces it.
 - (c) It enhances it.
 - (d) It obstructs it.

- 19 Which of the following increases the activity of fish in the aquatic environment?
- (a) The increase of the percentage of dissolved oxygen in water.
 - (b) The decrease of the pH value in water.
 - (c) The increase of water salinity.
 - (d) The increase of the effects of human activities on water.

- 20 * Which of the following factors increases the solubility of oxygen gas in water?
- (a) The increase of water salinity and waves movement.
 - (b) The increase of waves movement and the decrease of temperature.
 - (c) The increase of the pH value and the temperature.
 - (d) The increase of acidification and the decrease of water salinity.

Carbon dioxide gas (CO₂)

- 21 If you have two solutions that are different in concentration which are separated from each other by a semi-permeable membrane (allows the passage of water and dissolved substances), which choice in the following table expresses the property by which each of solvent and solute are transferred between the two solutions?

	Solvent	Solute
(a)	Diffusion	Osmosis
(b)	Osmosis	Diffusion
(c)	Diffusion	Diffusion
(d)	Osmosis	Osmosis

- 22 Which of the following has the main role in the formation of organic substances through the photosynthesis process?
- (a) O₂ gas.
 - (b) CO₂ gas.
 - (c) Glucose.
 - (d) Collagen.

- 23 Which of the following decreases the percentage of carbon dioxide gas in water?
- (a) The gases exchange between water and atmospheric air.
 - (b) The respiration of marine animals.
 - (c) Photosynthesis of algae.
 - (d) Industrial pollution.

- 24 Which of the following isn't considered a source of dissolved carbon dioxide gas in the aquatic environment?
- (a) The atmosphere.
 - (b) Photosynthesis process.
 - (c) The respiration of fish and mollusks.
 - (d) Decomposed organic substances.