

Corrigendum/Explanation SFG 2026 Level 2 Test 3

**Number of items taken for scoring: 49**

**Number of items dropped: 01 (Question no. 16)**

There is 1 change in today's paper (Q.16). Q.16 has been dropped due to the discrepancy in Statement III of the Question.

**Also, some extra explanations have been provided for the students who have raised doubts.**

Q.16) In Statement III of the question by mistake, latitude was mentioned instead of altitude. The Statement compares the amount of dissolved oxygen in lower and higher altitudes

**For Future Reference:**

Q.16) Dissolved Oxygen (DO) in water bodies is influenced by various physical and environmental factors. In this context, consider the following statements:

- I. Under similar conditions, cold water can hold more dissolved oxygen than warm water.
- II. Under similar temperature and pressure conditions, freshwater can hold more dissolved oxygen than seawater.
- III. **Compared to lower altitudes**, dissolved oxygen levels are generally higher at high altitudes due to lower temperatures.
- IV. Stagnant water bodies tend to have lower dissolved oxygen compared to flowing or turbulent water bodies.

Which of the statements given above are correct?

- a) I, II and III only
- b) I, II and IV only
- c) III and IV only
- d) I, II, III and IV

**Ans) b**

**Exp) Option b is the correct answer.**

Dissolved Oxygen (DO) refers to the amount of oxygen gas present in water, typically measured in mg/L. Although only a small quantity of oxygen (about a few parts per million) dissolves in water, it is **crucial for the survival of aquatic organisms** such as fish, plankton, and benthic fauna. The level of DO in water bodies is controlled by several physical and biological factors such as **temperature, salinity, atmospheric pressure, water movement, and biological activity**.

**Statement I is correct.** The solubility of gases, including oxygen, **decreases with increasing temperature**. For example, at 0°C, water can hold around 14–15 mg/L of oxygen, whereas at 35°C, it drops to about 7 mg/L. Thus, colder water bodies such as mountain streams tend to have higher DO levels, which supports richer aquatic life.

**Statement II is correct.** The presence of salts in seawater slightly reduces the solubility of oxygen. Freshwater can hold **more dissolved oxygen than saline water** under similar conditions. For instance, at 0°C, freshwater holds about 14–15 ppm DO, while seawater holds only about 10–11 ppm.

**Statement III is incorrect.** While lower temperatures at high altitudes favor higher oxygen solubility, **atmospheric (barometric) pressure decreases with altitude**, which reduces the overall solubility of oxygen in water. Hence, despite colder conditions, DO levels are generally **lower at high altitudes** compared to sea level.

**Statement IV is correct.** Flowing or turbulent water (like rivers and streams) promotes **aeration**, allowing oxygen from the atmosphere to dissolve into water efficiently. In contrast, stagnant water bodies (ponds, lakes) have limited mixing. Additionally, decomposition of organic matter by bacteria consumes oxygen, further reducing DO levels, especially during summer when oxygen demand is high.

Source:) <https://www.egyankosh.ac.in/bitstream/123456789/71132/1/Unit-3.pdf> page 49

<https://egyankosh.ac.in/bitstream/123456789/70784/1/Unit-7.pdf> page 26

<https://egyankosh.ac.in/bitstream/123456789/79935/1/Unit-6.pdf> page 168, 193

Subject:) Environment

Topic:) Various Environmental Issues

Subtopic:)

**Q.35)** A doubt was raised whether the Chemical Oxygen Demand measures the oxygen equivalent required to chemically oxidize both organic and inorganic matter.

**Exp)** Chemical Oxygen demand is designed to measure **organic contamination**, strong oxidizing agents (like potassium dichromate) **used in the process also chemically oxidize inorganic substances**, such as sulfides, sulfites, and ferrous iron, present in water.

So commonly, it is the biodegradable and non-biodegradable organic matter present in the water is calculated, though in the process it can also tell about inorganic pollutants in the water. In the question, there is no mention of only organic matter, but we are talking about the total organic matter in the water, is calculated which is a correct statement.