

Question 30 (Answer: **D**)

- First let the large suspended particles settle out – sedimentation.
- Then filter to remove the finer insoluble solids.
- Chlorinate last, to kill the bacteria in water that is already clear.

Question 29 (Answer: **C**)

- Anhydrous copper(II) sulfate is *white* and turns blue when water is added.
- Anhydrous cobalt(II) chloride is *blue* and turns pink.
- Both are standard tests for water, and both go from the anhydrous colour to the hydrated one.

Question 28 (Answer: **A**)

- Harmful microbes come from human or animal waste.
- Untreated sewage entering a river is the source.
- Fertilisers, detergents and plastics are pollutants but they are not living microbes.

Question 29 (Answer: **C**)

- Anhydrous copper(II) sulfate is white and turns blue on adding water.
- Anhydrous cobalt(II) chloride is blue and turns pink.
- Both changes are standard tests for the presence of water.

Question 31 (Answer: **D**)

- Dissolved solutes *raise* the boiling point above 100 °C, so statement 1 is wrong.
- They lower the freezing point below 0 °C, so statement 2 is right.
- It is still mostly water, so it turns anhydrous copper(II) sulfate blue – statement 3 is right.

Question 32 (Answer: **C**)

- Sedimentation lets *suspended* solids settle; it cannot remove dissolved substances – statement 1 is wrong.
- Filtration then takes out the remaining insoluble solids – statement 2 is right.
- Chlorine is added to kill bacteria – statement 3 is right.