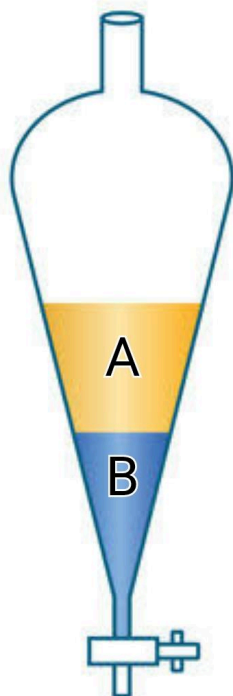


- I. Given below is a picture of a separating funnel that is used to separate two liquids. The flow of liquids can be regulated by the stopcock present at the bottom of the separating funnel.



1. Which of the following is true?
 - a. A is denser than B
 - b. B is denser than A
 - c. The densities of A and B are equal
 - d. Either a or b
2. The liquids A and B can be
 - a. water and alcohol
 - b. olive oil and water
 - c. vinegar and water
 - d. all the above
3. Which of the following will be observed on opening the stopcock?
 - P. Liquid A will come out first
 - Q. Liquid B will come out first
 - R. Liquids of higher density comes out first
 - S. Liquids of lower density comes out first

Options

- a. P and S
- b. Q and S
- c. P and R
- d. Q and R

II. The conversion of gas to liquid due to lowering of temperature is known as condensation. Gases can be compressed by applying pressure. If the pressure applied is sufficient, they can even be converted to the liquid state.

1. CNG is a fuel which can be used to run certain vehicles and is based on the compression of gases. The full form of CNG is
 - a. Contaminated Natural Gas
 - b. Compressed Nitrogen Gas
 - c. Compressed Natural Gas
 - d. Contaminated Nitrogen Gas
2. The phenomenon of compression is based on
 - a. Increase in spaces between particles on decreasing pressure
 - b. Increase in spaces between particles on increasing pressure
 - c. Decrease in spaces between particles on decreasing pressure
 - d. Decrease in space between particles on increasing pressure
3. Liquefied Petroleum Gas or LPG is a fuel commonly used for cooking in the kitchen.
 - A. The fuel is in liquid state in the cylinder
 - B. The fuel is in gaseous state in the cylinder
 - C. The fuel is in liquid state when released outside the cylinder
 - D. The fuel is in gaseous state when released outside the cylinder

Options

- a. A and C
- b. A and D
- c. B and C
- d. B and D

III. Identify A, B, P and Q

Some soft drinks are often called carbonated drinks as they have A gas dissolved in them. Thus, A is P in water. On the other hand, B is a gas which is the most abundant component of the earth's atmosphere and is Q in water.

IV. Name the following

1. A gas which is a supporter of combustion and needed by aerobic organisms to survive
2. A gas which protects us from the harmful rays of the sun

V. The SI system is a standardized system used in measurement.

- a. Name two other unit systems other than the SI system along with their full forms.
- b. Would you recommend using units like fathom, cubit, handspan etc to measure length. Justify.