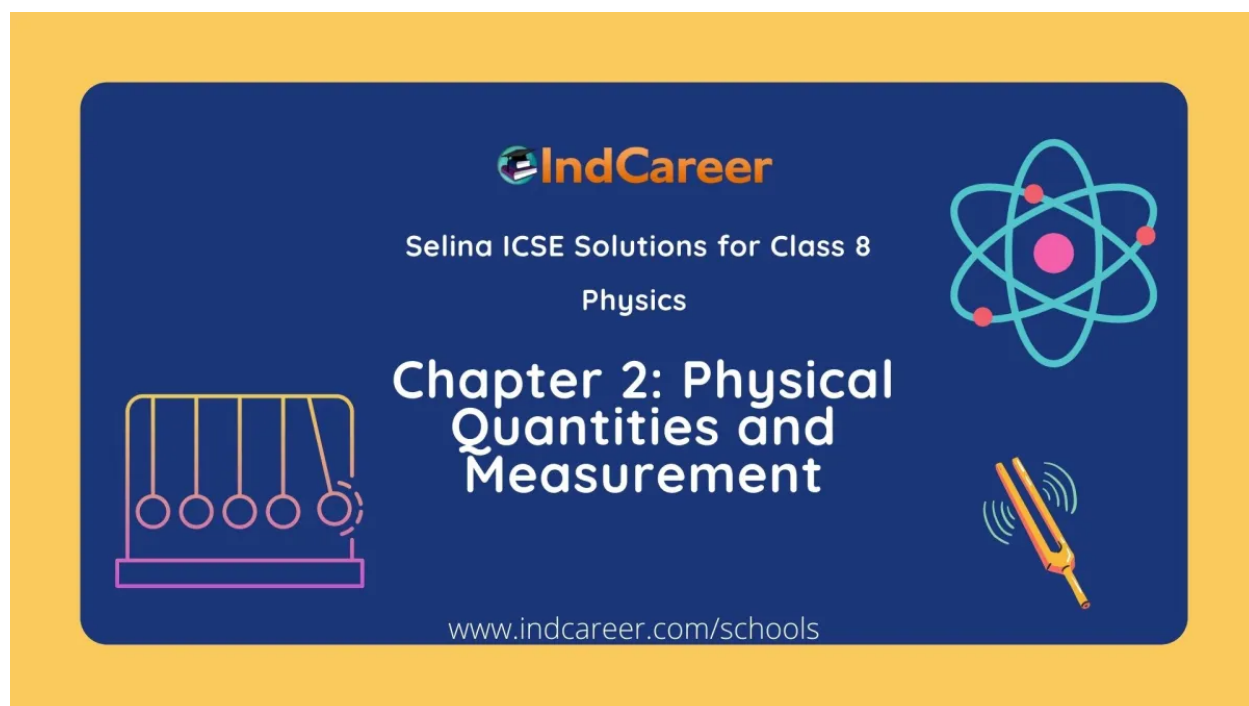


Selina Class 8 ICSE Solutions Physics :

Chapter 2- Physical Quantities and Measurement



For any clarifications or questions you can write to **info@indcareer.com**

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Chapter 2- Physical Quantities and Measurement

Class 8: Physics Chapter 2 solutions. Complete Class 8 Physics Chapter 2 Notes.

Selina Class 8 ICSE Solutions Physics : Chapter 2- Physical Quantities and Measurement

Selina 8th Physics Chapter 2, Class 8 Physics Chapter 2 solutions

A. Objective Questions

Question 1.

Write true or false for each statement

(a) Equal volumes of the two different substances have equal masses.

Answer: False.

(b) The density of a piece of brass will change by changing its size or shape.

Answer: False.

(c) The density of a liquid decreases with an increase in its temperature.

Answer: True.

(d) The relative density of water is 1.0.

Answer: True.

(e) The relative density of a substance is expressed in gm-3 .

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Answer: False.

(f) When a body is immersed in a liquid, the buoyant force experienced by the body is equal to the volume of the liquid displaced by it.

Answer: False.

(g) A body experiences the same buoyant force while floating in water or alcohol.

Answer: True.

(h) A body experiences the same buoyant force when it floats or sinks in water.

Answer: False.

(i) A body floats in a liquid when its weight becomes equal to the weight of the liquid displaced by its submerged part.

Answer: True.

(j) A body while floating sinks deeper in a liquid of low density than in a liquid of high density.

Answer: True.

Question 2.

Fill in the blanks

(a) 1kg is the mass of 1000 ml of water at 4°C.

(b) Mass = density $\times$ volume.

(c) The S.I. unit of density is Kg m^{-3}

(d) The density of water is 1000Kg m^{-3}

(e) $1\text{ g cm}^{-3} = 1000\text{ Kg m}^{-3}$

(f) The density of a body which sinks in water is more than 1000 Kg

(g) A body sinks in a liquid A, but floats in a liquid. The density of the liquid is less than the density of liquid B

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(h) A body sinks in water, but a body Y floats on water. The density of the body is more than the density of the body.

(i) The buoyant force experienced by a body when floating in salt-water is equal to or same that of when floating in pure water.

(j) The weight of a body floating in a liquid is zero.

Question 3.

Match the following

Column A

- (a) Kg
- (b) no unit
- (c) relative density
- (d) iron
- (e) Wood

Column B

- (i) relative density
- (ii) sinks in alcohol
- (iii) floats on water
- (iv) density
- (v) density bottle

Solution:

Column A

- (a) Kg
- (b) no unit
- (c) relative density
- (d) iron
- (e) Wood

Column B

- (iv) density
- (i) relative density
- (v) density bottle
- (ii) sinks in alcohol
- (iii) floats on water

Question 4.

Select the correct alternative

- (a) The correct relation is

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1. Density = Mass X Volume
2. Mass = Density X Volume
3. Volume = Density X Mass
4. Density = Mass + Volume

Solution: The correct answer is 2. Mass = Density X Volume

(b) The relative density of alcohol is 0.8 its density is

1. 0.8
2. 800 kg
3. 800 g
4. 0.8 kg

Solution: The correct answer is 2. 800 kg

(c) A block of wood of density 0.8gcm^{-3} has a volume of 60cm^3 . The mass of the block is 1.

1. 60.8 g
2. 75 g
3. 48 g
4. 0.013 g

Solution: The correct answer is 3. 48 g

(d) The density of aluminium is 2.7g and that of brass. The correct statement is

1. Equal masses of aluminium and brass have equal volumes
2. The mass of a certain volume of brass is more than the mass of an equal volume of aluminium.
3. The volume of a certain mass of brass is more than the volume of an equal mass of aluminium.

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4. Equal volumes of aluminium and brass have equal masses.

Solution: The correct answer is 2. The mass of a certain volume of brass is more than the mass of an equal volume of aluminium.

(e) A density bottle has a marking 25 mL on it. It means that:

1. the mass of density bottle is 25g
2. the density bottle will store 25 ml of any liquid in it
3. the density bottle will store 25 ml of water, but more volume of liquid denser than water.
4. the density bottle will store 25 ml of water, but more volume of a liquid lighter than water.

Solution: The correct answer is 2. the density bottle will store 25 ml of any liquid in it

(f) The correct statement is

1. The buoyant force on a body is equal to the volume of the liquid displaced by it
2. The buoyant force on a body is equal to the volume of the body
3. The buoyant force on a body is equal to the weight of the liquid displaced by it
4. The buoyant force on a body is always equal to the weight of the body.

Solution: The correct answer is 3. The buoyant force on a body is equal to the weight of the liquid displaced by it

(g) A piece of wood floats on water. The buoyant force on wood will be

1. zero
2. more than the weight of the wood piece
3. equal to the weight of the wood piece
4. less than the weight of the wood piece.

Solution: The correct answer is 3. equal to the weight of the wood piece

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(h) The weight of a body is more than the buoyant force experienced by it, due to a liquid. The body will

1. sink
2. float with it some part outside the liquid
3. float just below the surface of the liquid
4. Float with the whole of its volume above the surface of the liquid.

Solution: The correct answer is 1. sink



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