

CHEMISTRY STUDY MATERIALS FOR CLASS 9

(NCERT based Q.s-Answers of Chapter - 2)

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DATE:- 17/10/2020

Is Matter Around Us Pure

Q. 1: State whether the following statement is true or false:

Milk is a pure substance.

Answer 1: False

Q. 2: Name three mixtures found in nature

Answer 2: Milk, Paint, and Glass

Q. 3: Which of the following is a mixture? Salt, Air, Water, Alum, Sugar.

Answer 3: Air is a mixture.

Q.4: Name one metal and one non-metal which exist as liquids at room temperature.

Answer 4: Mercury is a liquid metal and bromine is a liquid non-metal.

Q. 5: Name a metal which is soft and a non- metal which is hard.

Answer 5: Sodium metal is soft and diamond is an extremely hard non-metal.

Q. 6: Name a non-metal which is a good conductor of electricity.

Answer 6: Graphite is a non-metal which is good conductor of electricity.

Q. 7: Name a liquid which can be classified as a pure substance and conducts electricity.

Answer 7: Mercury

Q. 8: Name one solid, one liquid and gaseous non - metal.

Answer 8: Carbon is a solid non-metal, bromine is a liquid non-metal and chlorine is a gaseous non-metal.

Q. 9: Name the property:

(a) Which allows metals to be hammered into thin sheets?

(b) Which enables metals to be drawn into wires?

Answer 9: (a). Malleability (b) Ductility

Q. 10: Which type of elements, metal or non- metals, shows the property of brittleness?

Answer 10: Non-metals show brittleness.

Q. 11: What is meant by saying that metals are malleable and ductile?

Answer 11: This means that metals can be drawn into thin sheets and can also be drawn into wires.

Q. 12: What is meant by saying that non-metals are brittle ?

Answer 12: This means that non-metals break into pieces when they are hammered.

Q. 13: What is meant by saying that metals are sonorous ?

Answer 13: This means that metals make a ringing sound when we strike them.

Q. 14: What is meant by saying that metals are lustrous ?

Answer 14: This means that metals are shiny in nature.

Q. 15: What is the general name of the materials which contain at least two pure substances and show the properties of the constituents?

Answer 15: Mixtures.

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Q. 16: "The properties of the product are different from those of the constituents". State whether this statement best describes an element, a compound or a mixture.

Answer 16: The given statement best describes a compound.

Q. 17: Name one element, one compound and one mixture.

Answer 17: Copper is an element, water is a compound and air is a mixture.

Q. 18: What is the major difference between a Answer and an ordinary mixture?

Answer 18: Mixtures are generally heterogeneous in which there is a boundary separation between different substituents.

Answers are homogeneous mixtures in which no separation is visible between different materials.

Q. 19: What name is given to those elements which are neither good conductors of electricity like copper nor insulators like sulphur?

Answer 19: Metalloids

Q. 20: Fill in the following blanks with suitable words:

- (a) An element is made up of only one kind of _____.
- (b) Brine is a _____ whereas alcohol is a _____.
- (c) Brass is an alloy which is considered a _____ .
- (d) The three important metalloids are _____, _____ and _____ .
- (e) The elements which are sonorous are called _____ .

Answer 20:(a).An element is made up of only one kind of atoms.

(b).Brine is a mixture whereas alcohol is a compound.

(c).Brass is an alloy which is considered a mixture.

(d).The three important metalloids are boron ,silicon and germanium.

(e).The elements which are sonorous are called metals.

Q. 21: Classify the following into elements and compounds:

- (i) H₂O (ii) He (iii) Cl₂ (iv) CO (v) Co

Answer 21: (i) H₂O – Compound (ii) He – Element (iii) Cl₂ - Element

(iv) CO – Compound (v) Co - Element

Q. 22: Classify the following as elements or compound: Iron, Iron sulphide, Sulphur, Chalk, Washing soda, Sodium, Carbon, Urea

Answer 22: Elements - Iron, Sulphur, Sodium and Carbon

Compounds - Iron sulphide, Chalk, Washing Soda and Urea

Q. 23: What elements do the following compounds contain? Sugar, Common salt

Answer 23: Sugar contains carbon, hydrogen and oxygen.

Common salt contains sodium and chlorine.

Q. 24: What are pure substances? Give two examples of pure substances.

Answer 24: A pure substance is one which is made up of only one kind of atoms or molecules. Examples - Oxygen and sugar.

Q. 25: What are the two types of pure substances? Give one example of each type.

Answer 25: Two types of pure substances -

(i). Pure substance made up of same kind of atoms. Example - Sulphur

(ii). Pure substance made up of same kind of molecules. Example - Water
