

Class: IX
Subject: Science
Topic: Elements, mixtures and compounds
No. of Questions: 20

1. List the points of differences between homogeneous and heterogeneous mixtures.
2. Brass is an example of
 - A. an alloy
 - B. a compound
 - C. a mixture
 - D. an element
3. A mixture consisting of two miscible liquids 'A' and 'B' whose boiling points differ by 5°C can be separated by which process ?
4. To make a saturated solution, 36 g of sodium chloride is dissolved in 100 g of water at 293K . find its concentration at this temperature.
5. Other than O and C, the main elements of a brick wall includes
 - A. Si
 - B. Ca
 - C. Both A and B
 - D. None of the Above
6. Given the names of the elements present in the following compounds :
 - A. Quicklime
 - B. Hydrogen bromide
 - C. Baking soda
 - D. Potassium sulphate
7. How would you confirm that a colourless liquid given to you is pure water?

8. A compound results from the chemical combination of
- A. two or more atoms
 - B. two or more metals
 - C. Both A and B
 - D. None of the Above
9. What are the advantages of chromatography as a method of separation of components of a mixture ?
10. Which of the following is considered to be a pure substance ?
- A. Granite.
 - B. Sodium chloride.
 - C. Muddy water
 - D. Milk of magnesia
11. Which of the following will show the "Tyndall effect" ?
- A. Salt solution
 - B. Milk
 - C. Copper sulphate solution
 - D. Starch solution
12. Why does ice float on water ? Is ice water homogeneous or heterogeneous matter ? Pure or a mixture ?
13. Other than oxygen and calcium, 92% of the earth's crust is made up of
- A. silicon
 - B. Iron
 - C. Aluminum
 - D. all of these
14. Hydrogen and oxygen combine in the ratio of 1 : 8 by mass to form water. What mass of oxygen gas would be required to react completely with 3 g of hydrogen gas?

15. A solid white substance A is heated strongly in the absence of air. It decomposes to form a new white substance B and a gas C. The gas has exactly the same properties as the product obtained when carbon is burned in an excess of oxygen. Based on these observations. Can we determine whether solids A and B and the gas C are elements or compounds ? Explain your conclusions for each substance.
16. Sometimes we refer to alloys as substitutional solids. Why?
17. Which postulate of Dalton's atomic theory can explain the law of definite proportions?
18. The physical properties are individual and not the result of constituting elements in
- A. metals
 - B. non-metals
 - C. mixtures
 - D. compounds
19. Why is a compound considered as pure substance but mixture is not considered as a pure substance ?
20. Mixtures can be separated into their components by taking advantage of differences in the chemical properties of the components . Why might this separation method be less convenient than taking advantage of differences in the physical properties of the components?