Delhi Public School Guwahati

"Under the aegis of the Delhi Public School Society, Delhi"

COMPETENCY BASED QUESTIONS

CLASS 9 CHEMISTRY

CHAPTER 2: IS MATTER AROUND US PURE

Time Allowed: 15 minutes

Maximum Marks: 15

1 To prepare a colloidal solution of starch, we should: **[1]**

a) add the thin paste of starch to hot water with stirring

b) add starch powder to cold water and boil

c) add the starch powder to boiling water and cool

d) heat starch, add it to cold water and then bring it to boil

2 Which of the following statements are incorrect **[1]**

a. The properties of a compound are different from its constituents elements

b. A mixture is homogenous but a compound is heterogeneous

c. Formation of a compound is a chemical change

d. Formation of a mixture is a chemical change

a) (b) and (d)

b) (a), (b) and (c)

c) All of these

d) (a) and (b)

3 Match the pair: **[1]**

	Column I		Column II
1	Common salt from seawater	A	Gel
2	Suspension	B	Evaporation
3	Brass	C	Centrifugation
4	Cream from milk	D	Solid in a solid mixture
5	Liquid in solid	E	Heterogeneous

a) 1 (C), 2 (A), 3 (D), 4 (B), 5 (E)

b) 1 (A), 2 (D), 3 (C), 4 (E), 5 (B)

c) 1 (D), 2 (B), 3 (A), 4 (E), 5 (C)

d) 1 (B), 2 (E), 3 (D), 4 (C), 5 (A)

4 Which of the following statements are true for pure substances? **[1]**

i. Pure substances contain only one kind of particles

ii. Pure substances may be compounds or mixtures

iii. Pure substances have the same composition throughout

iv. Pure substances can be exemplified by all elements other than nickel

a) (i) and (iii)

b) (iii) and (iv)

c) (ii) and (iii)

d) (i) and (ii)

5 Which of the following are physical changes? **[1]**

i. Melting of iron metal

ii. Rusting of iron

iii. Bending of an iron rod

iv. Drawing a wire of iron metal

a) (i), (ii) and (iii)

b) (ii), (iii) and (iv)

c) (i), (ii) and (iv)

d) (i), (iii) and (iv)

6 **Assertion (A):** A solution of table salt in a glass of water is homogeneous. **[1]**

Reason (R): A solution having different composition throughout is homogeneous.

a) Both A and R are true and R is the correct explanation of A.

b) Both A and R are true but R is not the correct explanation of A.

c) A is true but R is false.

d) A is false but R is true.

7 **Assertion (A):** The gas obtained by Group I is hydrogen, It is not advised to do the combustion test for hydrogen. **[1]**

Reason (R): The material obtained by Group I is a mixture of the two substances. The substances given are the elements: iron and sulphur.

a) Both A and R are true and R is the correct explanation of A.

b) Both A and R are true but R is not the correct explanation of A.

c) A is true but R is false.

d) A is false but R is true.

8 **Assertion (A):** Tyndall effect is an optical property. **[1]**

Reason (R): Electrophoresis is an electrical property.

a) Both A and R are true and R is the correct explanation of A.

b) Both A and R are true but R is not the correct explanation of A.

c) A is true but R is false.

d) A is false but R is true.

9 **Assertion (A):** Pragya tested the solubility of 3 different substances at different temperatures. She noted at 313K 62g of potassium Nitrate dissolved in 100g of water. **[1]**

Reason (R): To produce a saturated solution of potassium nitrate in 50g of water of potassium nitrate needed.

a) Both A and R are true and R is the correct explanation of A.

b) Both A and R are true but R is not the correct explanation of A.

c) A is true but R is false.

d) A is false but R is true.

10 **Assertion (A):** When a beam of light is passed through a colloidal solution placed in a dark place the path of the beam becomes visible. **[1]**

Reason (R): Light gets scattered by the colloidal particles.

a) Both A and R are true and R is the correct explanation of A.

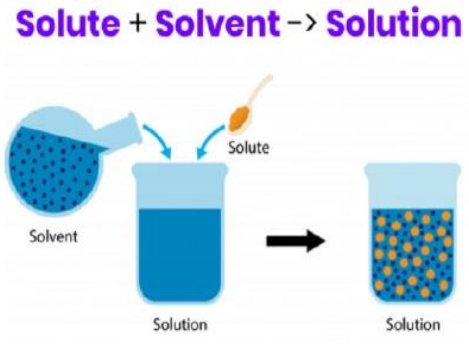
b) Both A and R are true but R is not the correct explanation of A.

c) A is true but R is false.

d) A is false but R is true.

Question no 11 to 15 is based on the given text. Answer the following after reading the text carefully

Mixtures are constituted by more than one kind of pure form of matter. Sodium chloride is itself a pure substance matter. The solution is a homogeneous mixture of two or more substances. Lemonade, soda water etc. are all examples of solutions. Alloys are mixtures of two or more metals or a metal and a non-metal and cannot be separated into their components by physical methods. A solution has a solvent and a solute as its components. The component of the solution that dissolves the other component in it (usually the component present in a larger amount) is called the solvent. The component of the solution that is dissolved in the solvent
(usually present in lesser quantity) is called the solute.



11 In a water-sugar solution: **[1]**

a) water is solute and water is also solvent

b) water is solvent and sugar is solute

c) water is solute and sugar is solvent

d) none of these

12 The particles of a solution are smaller than: **[1]**

a) 10 nm in diameter

b) 1 nm in diameter

c) 6 nm in diameter

d) 5 nm in diameter

13 Which of the following statements are true for pure substances? **[1]**

a) Pure substances may be compounds or mixtures.

b) Pure substances have different compositions throughout.

c) Pure substances can be exemplified by all elements other than nickel.

d) Pure substances contain only one kind of particle.

14 Brass is a mixture of: **[1]**

a) 30% zinc and 40% copper

b) 30% zinc and 70% copper

c) 60% zinc and 70% copper

d) 70% zinc and 50% copper

15 Tincture of iodine solution is made by dissolving: **[1]**

a) iodine in alcohol

b) iodine in water

c) iodine in potassium iodide

d) iodine in vaseline