

## Science Quiz - April 2021

**Kumud Bala**

1. What colour does the methyl orange turn when added to a base?  
(A) it changes its colour to yellow  
(B) it changes its colour to red  
(C) it changes its color greenish-yellow  
(D) it does not change its color.
2. What colour does the red cabbage extract turn when added to a base?  
(A) it turns greenish-yellow in basic solution  
(B) it turns red in a base  
(C) it turns blue in basic solution  
(D) it does not change its colour.
3. Which is an indicator red in acid solution but turns blue in basic solution?  
(A) red litmus paper (B) methyl orange (C) phenolphthalein (D) red cabbage extract
4. Which is an indication pink in alkaline solution but turns colorless in an acidic solution.  
(A) methyl orange (B) phenolphthalein (C) blue litmus paper (D) none of these
5. When a solution is added to a cloth strip treated with onion extract, then the smell of onion cannot be detected. The given solution contains ----  
(A) an acid (B) a base (C) alcohol (D) water
6. When a solution is added to vanilla extract, then the characteristic smell of vanilla cannot be detected. The solution is -----  
(A) an acidic solution (B) alcoholic solution (C) a basic solution (D) none of these.
7. Natural source of tartaric acid is ----  
(A) sour milk (B) tomatoes (C) unripe grapes and tamarind (D) lemons
8. Which is the animal, whose sting contains formic acid?  
(A) ant (B) nettle leaf (C) bees (D) housefly
9. Those substance whose smell or odour changes in acidic or basic solution are called ----- indicators.  
(A) universal indicators (B) olfactory indicators (C) pH scale (D) litmus paper.
10. A purple dye is extracted from a plant called------. This dye is called a litmus solution.  
(A) lichen (B) turmeric (C) onion (D) red cabbage
11. What will be formed when an acid reacts with a metal oxide?  
(A) salt (B) salt and oxygen (C) salt and water (D) water and oxygen gas.
12. Which of the following does not involve a chemical reaction?  
(A) digestion of food in our body (B) process of respiration  
(C) burning of candle wax when heated (D) melting of candle wax on heating

13. You are given the solution of lead nitrate. In order to obtain a yellow precipitate you should mix with it a solution of:  
(A) potassium chloride      (B) potassium nitride  
(C) potassium sulphide      (D) potassium iodide
14. The chemical reaction between two substances is characterized by a change in colour orange to green. These two substances are most likely to be -----  
(A) potassium dichromate solution and sulphur dioxide  
(B) potassium permanganate solution and sulphur dioxide  
(C) potassium permanganate solution and lemon juice  
(D) potassium dichromate solution and carbon dioxide
15. Out of the following is an endothermic reaction. This is -----  
(A) combination of carbon and oxygen to form carbon monoxide  
(B) combination of nitrogen and oxygen to form nitrogen monoxide  
(C) combination of glucose and oxygen to form carbon dioxide and water  
(D) combination of zinc and hydrochloric acid to form zinc chloride and hydrogen.
16. The chemical equations are balanced to satisfy one of the following laws in chemical reactions. This law is known as:  
(A) law of conservation of momentum  
(B) law of conservation of mass  
(C) law of conservation of motion  
(D) law of conservation of magnetism
17. Antioxidants are often added to fat -containing foods to prevent----- due to oxidation.  
(A) reduction    (B) rancidity    (C) corrosion    (D) none of these.
18. In the context of redox reactions, the removal of hydrogen from a substance is known as -----  
(A) oxidation (B) dehydration (C) reduction (D) dehydrogenation
19. The chemical reaction involved in the corrosion of iron metal is that of:  
(A) oxidation as well as displacement  
(B) reduction as well as combination  
(C) oxidation as well as combination  
(D) reduction as well as displacement
20. A white precipitate will be formed if we add common salt solution to -----  
(A) barium nitrate solution      (B) potassium nitrate solution  
(C) silver nitrate solution      (D) magnesium nitrate solution
21. Which of the following can be decomposed by the action of light?  
(A) NaCl      (B) KCl      (C) AgCl      (D) CuCl
22. A colourless lead salt, when heated produces a yellow residue and brown fumes. Name the lead salt.  
(A)  $\text{Pb}(\text{NO}_3)_2$       (B)  $\text{PbI}_2$       (C)  $\text{PbSO}_4$       (D)  $\text{PbCl}_2$
23. A red-brown metal X forms a salt  $\text{XSO}_4$ . When hydrogen sulphide gas is passed through an aqueous solution of  $\text{XSO}_4$ , then a black precipitate of XS is formed along with sulphuric acid solution. What could the salt  $\text{XSO}_4$  be?  
(A)  $\text{FeSO}_4$       (B)  $\text{CuSO}_4$       (C)  $\text{PbSO}_4$       (D)  $\text{K}_2\text{SO}_4$

- Answers |
- 1. (A) 2. (A) 3. (A) 4. (B) 5. (B) 6. (C) 7. (C) 8. (A) 9. (B) 10. (A)
  - 11. (C) 12. (D) 13. (D) 14. (A) 15. (B) 16. (B) 17. (B) 18. (A) 19. (C) 20. (C)
  - 21. (C) 22. (A) 23. (B)