**Tarun Arora**  **R.L. Institute M: 9416974837**

**Max Time : 1 hr** **SCIENCE TEST – 1 Max Marks : 30**

**Class = 10th CODE : A**

1. Fire flies glow at night due to ………….. of Luciferin (protein).

|  |  |  |  |
| --- | --- | --- | --- |
| a) reduction | b) oxidation | c) combustion | d) displacement |

1. Identify the oxidizing agent in the following reaction :

MnO2 + 4 HCl → MnCl2 + Cl2 + 2 H2O

|  |  |  |  |
| --- | --- | --- | --- |
| a) MnO2 | b) MnCl2 | c) HCl | d) H2O |

1. In the equation , Pb3O4 + 8 HCl → 3 PbCl2 + Cl2 + 4 H2O7 the substance , Pb3O4 acts as

|  |  |  |  |
| --- | --- | --- | --- |
| a) an oxidizing agent | b) an acid | c) a reducing agent | d) a dehydrating agent |

1. Electrolysis of water is a decomposition reaction. The mole ratio of hydrogen and oxygen gases liberated during electrolysis of water is

|  |  |  |  |
| --- | --- | --- | --- |
| a) 1 : 1 | b) 2 : 1 | c) 4 : 1 | d) 1 : 2 |

1. The following reaction is an example of :

Fe2O3 + 2 Al 2 Fe + Al2O3

|  |  |
| --- | --- |
| a) thermal decomposition reaction | b) displacement reaction |
| c) double displacement reaction | d) neutralisation reaction |

1. Which of the following is incorrect statement ?

|  |  |
| --- | --- |
| a) Mg is more reactive than H | b) Fe is less reactive than Zn |
| c) Cu is more reactive than Al | d) Ag is less reactive than Cu |

1. Mixing of an acid or base with water results in …………….. in the concentration of ions per unit volume.

|  |  |  |  |
| --- | --- | --- | --- |
| a) decrease | b) increase | c) no change | d) reverse change |

1. Which one of the following can be used as an acid-base indicator by a visually impared student ?

|  |  |  |  |
| --- | --- | --- | --- |
| a) Litmus | b) Turmeric | c) Vanilla essence | d) Petunia leaves |

1. Which of the following gives OH – ions on dissociation in water ?

|  |  |  |  |
| --- | --- | --- | --- |
| a) Calcium carbonate | b) Iron sulphide | c) Calcium oxide | d) All of these |

1. Which of the following is not a natural indicator ?

|  |  |
| --- | --- |
| a) Red cabbage juice | b) Turmeric juice |
| c) Flowers of hydrangea plant | d) None of the above |

1. Which of the following hydroxides is not an alkali ?

|  |  |  |  |
| --- | --- | --- | --- |
| a) Ammonium hydroxide | b) Calcium hydroxide | c) Copper hydroxide | d) Sodium hydroxide |

1. Identify ‘X’ and ‘Y’ in the following reaction :

Ca(OH)2 (aq) + X (g) → CaCl2 (s) + Y + 2 NH3 (g) ↑

|  |  |
| --- | --- |
| a) X = NH4 Cl , Y = O2 | b) X = NH4 Cl , Y = H2O |
| c) X = (NH4 )2 SO4 , Y = SO2 | d) X = NH4 OH , Y = O2 |

1. When the pH increases , the acidity decreases.

|  |  |  |  |
| --- | --- | --- | --- |
| a) True | b) False | c) Can’t say | d) Partially true/false |

1. A solution turns red litmus blue, its pH is likely to be

|  |  |  |  |
| --- | --- | --- | --- |
| a) 1 | b) 4 | c) 5 | d) 10 |

1. Useful substance for disinfecting water is ………….. .

|  |  |  |  |
| --- | --- | --- | --- |
| a) washing soda | b) common alum | c) baking soda | d) bleaching powder |

1. Which of the following reactions involves the combination of two elements ?

|  |  |
| --- | --- |
| a) 2 CO + O2 → 2 CO2 | b) NH3 + HCl → NH4Cl |
| c) 2 Mg + O2 → 2 MgO | d) NO + O2 → 2 NO2 |

1. Which of the following is acidic in nature ?

|  |  |  |  |
| --- | --- | --- | --- |
| a) Apple juice | b) Lime water | c) Soap solution | d) Sodium bicarbonate |

1. What is the difference in water of crystallisation of washing soda and gypsum ?

|  |  |  |  |
| --- | --- | --- | --- |
| a) 2 | b) 4 | c) 8 | d) 1 |

1. What happens when ferrous sulphate crystals are heated ?

a) A gas having the smell of burning sulphur is evolved

b) No gas is evolved

c) Brown coloured gas is evolved

d) Colourless and odourless gas is evolved

1. Identify the reducing agent and the oxidizing agent in the reactions (i) and (ii) respectively

(i) MnO2 (s) + 4 HCl (aq) → MnCl2 (s) + Cl2 (g) + 2 H2O (l)

(ii) CuO (s) + H2 (g) → Cu (s) + H2O (l)

|  |  |
| --- | --- |
| a) MnO2 (s) , H2 (g) | b) HCl (aq) , CuO (s) |
| c) Cl2 (g) , Cu (s) | d) MnCl2 (s) , H2O (l) |

1. Rancidity can be prevented by

|  |  |
| --- | --- |
| a) adding anti-oxidants | b) packaging oily food in nitrogen gas |
| c) both (a) and (b) | d) none of these |

1. Which of the following solutions has the lowest pH value ?

|  |  |
| --- | --- |
| a) 0.1 molar NaCl solution | b) 0.01 molar NaHCO3 solution |
| c) 0.001 molar Na2CO3 solution | d) 0.01 molar NaOH solution |

1. The incorrect statements about acids is

|  |  |
| --- | --- |
| a) They give H+ ions in water | b) They are sour in taste |
| c) They turn blue litmus red | d) They give pink colour with phenolphthalein |

1. Which of the following gives the correct increasing order of acidic strength ?

|  |  |
| --- | --- |
| a) Water < Acetic acid < Hydrochloric acid | b) Water < Hydrochloric acid < Acetic acid |
| c) Acetic acid < Water < Hydrochloric acid | d) Hydrochloric acid < Water < Acetic acid |

1. Which one of the following will turn red litmus blue ?

|  |  |  |  |
| --- | --- | --- | --- |
| a) Lactic acid | b) Human blood | c) Oxalic acid | d) Milk |

1. Aqueous solution of copper sulphate reacts with aqueous ammonium hydroxide solution to give

|  |  |  |  |
| --- | --- | --- | --- |
| a) brown ppt. | b) pale blue ppt. | c) white ppt. | d) green ppt. |

1. Phenolphthalein gives \_\_\_\_\_\_\_ colour in basic medium whereas methyl orange gives \_\_\_\_\_\_\_\_ colour in acidic medium.

|  |  |  |  |
| --- | --- | --- | --- |
| a) colourless , red | b) pink , red | c) pink , yellow | d) colourless , yellow |

1. Which of the following is not a mineral acid ?

|  |  |
| --- | --- |
| a) Hydrochloric acid | b) Citric acid |
| c) Sulphuric acid | d) Nitric acid |

1. Which gas is evolve when acid reacts with metal carbonates ?

|  |  |  |  |
| --- | --- | --- | --- |
| a) CO2 | b) H2 | c) NH3 | d) O2 |

1. Consider the following reaction : p Mg3N2 + q H2O → r Mg(OH)2­ + s NH­3 ,

When the equation is balanced, the coefficients p , q , r , s respectively are :

|  |  |  |  |
| --- | --- | --- | --- |
| a) 1, 3, 3, 2 | b) 1, 6, 3, 2 | c) 1, 2, 3, 2 | d) 2, 3, 6, 2 |

**Tarun Arora**  **R.L. Institute M: 9416974837**

**Max Time : 1 hr** **SCIENCE TEST – 1 Max Marks : 30**

**Class = 10th CODE : B**

1. Which of the following is acidic in nature ?

|  |  |  |  |
| --- | --- | --- | --- |
| a) Apple juice | b) Lime water | c) Soap solution | d) Sodium bicarbonate |

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| a) adding anti-oxidants | b) packaging oily food in nitrogen gas |
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| c) Acetic acid < Water < Hydrochloric acid | d) Hydrochloric acid < Water < Acetic acid |

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|  |  |
| --- | --- |
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| c) Cl2 (g) , Cu (s) | d) MnCl2 (s) , H2O (l) |

1. Mixing of an acid or base with water results in …………….. in the concentration of ions per unit volume.

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| --- | --- | --- | --- |
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**Answers**

**Chemical Reaction & Acid-Base Test [CLASS = 10th ]**

|  |  |
| --- | --- |
| **CODE : A** | **CODE : B** |
| 1. b | 1. a |
| 2. a | 2. c |
| 3. a | 3. b |
| 4. b | 4. a |
| 5. b | 5. d |
| 6. c | 6. a |
| 7. a | 7. c |
| 8. c | 8. d |
| 9. c | 9. b |
| 10. d | 10. b |
| 11. c | 11. c |
| 12. b | 12. a |
| 13. a | 13. a |
| 14. d | 14. b |
| 15. d | 15. b |
| 16. c | 16. a |
| 17. a | 17. c |
| 18. c | 18. d |
| 19. a | 19. b |
| 20. b | 20. a |
| 21. c | 21. b |
| 22. a | 22. b |
| 23. d | 23. b |
| 24. a | 24. a |
| 25. b | 25. c |
| 26. b | 26. c |
| 27. b | 27. b |
| 28. b | 28. a |
| 29. a | 29. c |
| 30. b | 30. d |