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| **CLASS REVISION TEST-1****SCIENCE - CHEMISTRY** |
| **EX.NO**  |  | **AD.NO** |  | **GRADE**  | **X-LAVENDER** |
| **DATE**  | **15/11/19** | **MARKS** | **60** | **TIME** | **2 Hrs** |

**SECTION - A**

**I. Choose the correct answer:- 10x1=10** 1. A dilute solution of sodium carbonate was added to two test tubes - one containing dil.HCl

(A) and the other containing dilute NaOH (B) the correct observation was-

a. a brown coloured gas liberated in test tube A

b. a brown coloured gas liberated in test tube B

c. a colourless gas liberated in test tube A

d. a colourless gas liberated in test tube B

2. In the equation, NaOH + HNO3  NaNO3 + H2O nitric acid is acting as-

a. an oxidising agent b. an acid c. a nitrating agent d. a dehydrating agent

3. Which of the following reaction is characterized by the yellow colour of product?

 

4. Which one of the following involves a chemical reaction?

a. Evaporation of water

b. Storing on nitrogen gas under pressure

c. Keeping petrol in a China dish in open

d. Heating magnesium wire in the presence of air at high temperature

5. Ethane (C2H6) on complete combustion gave CO2 and water. It shows that the results are in accordance with the law of conservation of mass. Then, the coefficient of oxygen is equal to

 a. 3 b. 5/2 c. 2 d. 7/2

6. A solution reacts with crushed egg-shells to give a gas that turns lime-water milky. The solution contains

a. NaCl b. HCl c. LiCl d. KCl

7. When Ca(OH)2 reacts with CO2(g), it will give CaCO3(S) and H2O(*l*). The nature of CaCO3 is

a. acidic b. basic c. neutral d. All are possible

8. Which of the following acid does not react with metals –

 a. sulphuric acid b. phosphoric acid c. carbonic acid d. nitric acid

9. The pH of a solution is 4.0. What should be the change in the hydrogen ion concentration of the solution, if its pH is to increased to 5.0.

1. Decreases to 1/10 of its original concentration
2. halved
3. doubled
4. increases by 10 times

10. Plaster of Paris hardens by-

 a. giving of CO2 b. pale blue precipitate

 c. white precipitate d. green precipitate

**II. Assertion and Reason:- 4x1=4**

**In the following questions, a statement of assertion is followed by a statement of reason. Mark the correct choice as:**

a. If both assertion and reason are true and reason is the correct explanation of assertion.

b. If both assertion and reason are true but reason is not the correct explanation of assertion.

c. If assertion is true but reason is false.

d. If both assertion and reason are false.

**11.** **Assertion :** Fe2O3 + 2Al Al2O3 + 2Fe

The above chemical equation is an example of displacement reaction.

 **Reason :** Aluminium being more reactive than iron, displaces Fe from its oxide.

**12. Assertion :** Photosynthesis is considered as an endothermic reaction.

 **Reason :** Energy gets released in the process of photosynthesis.

**13.** **Assertion :** On adding H2SO4 to water the resulting aqueous solution get corrosive.

 **Reason :** Hydronium ions are responsible for corrosive action.

**14.** **Assertion :** During electrolysis of concentrated aqueous solution of sodium chloride, hydrogen

is produced at anode and chlorine gas is produced at cathode.

 **Reason :** Ions get attracted to oppositely charged electrodes.

**III. Answer in a word:- 7x1=7**

15. In electrolysis of water, why is the volume of gas collected over one electrode double that of gas

 collected over the other electrode.

16. On what basis is a chemical reaction balanced?

17. Balance the given chemical equation:

 FeSO4(s) $→$ Fe2O3(s) + SO2(g) + SO3(g)

18. Define alkalies and give an example.

19. A student detected the pH of four unknown solutions A, B, C and D as follows: 11, 5, 7 and 2. Predict the nature of these solutions.

20. a. It has been found that marble of Taj is getting corroded due to development of industrial areas around it. Explain this fact giving a chemical equation.

 b. Consider the chemical equations given below and answer the questions which follow:

21. Reaction of compound X with aluminium is used to join railway tracks or cracked machine parts.

**SECTION - B**

**IV. Answer the following questions:- 5x3=15**

22. In the electrolysis of water:

a. Name the gas collected at the cathode and anode respectively.

b. Why is volume of gas collected at one electrode double than that at the other? Name this gas.

c. How will you test this gas?

23. What is chlor-alkali process? Write a balanced chemical equation for the reaction involved in this

 process to justify your answer.

24. a.What is the action of litmus in

 i. dry ammonia gas ii. solution of ammonia gas in water?

 b. State the observations you would make on adding sodium hydroxide to an aqueous solution of

 i. ferrous sulphate ii. aluminium chloride.

25. pH has a great importance in our daily life. Explain by giving four examples.

26. a. The blue colour of crystals of a substance on heating in a closed test tube gets changed but the

 colour was regained after sometime on cooling. Name that substance and write its chemical

 formula. Explain the phenomenon involved.

 b. Write name and chemical formulae of two such compounds whose one unit is associated with

 10 and 2 water molecules respectively.

**SECTION - C**

**V. Answer the following questions briefly:- 4x6=24**

27. Define chemical reaction. State four observations which helps to determine whether a chemical

 reaction has taken place or not. Write one example of each observation with a balanced chemical

 equation.

28. (a) Write one example for each of decomposition reaction carried out with the help of

 (i) Electricity, (ii) Heat, (iii) Light

(b) Which of the following statement is correct and why?

Copper can displace silver from silver nitrate solution and silver can displace copper from copper sulphate solution.

29. a. Explain why is hydrochloric acid a strong acid and acetic acid, a weak acid. How can it be

 verified?

 b. Explain why aqueous solution of an acid conducts electricity.

 c. You have four solutions A, B, C and D. The pH of solution A is 6, B is 9, C is 12 and D is

i. Identify the most acidic and most basic solutions respectively.

ii. Arrange the above four solutions in the increasing order of H+ ion concentration.

iii. State the change in colour of pH paper on dipping in solution C and D.

30. a. A metal compound ‘X’ reacts with dilute H2SO4 to produce effervescence. The gas evolved

 extinguishes a burning candle. If one of the compound formed is calcium sulphate, then what is

 ‘X’ and the gas evolved? Also write a balanced chemical equation for the reaction which has

 occurred.

 b. i. Name one antacid. How does it help to relieve indigestion in stomach?

 ii. A farmer treats the soil with quickline or calcium carbonate. What is the nature of the soil?

 Why does the farmer treat the soil with quickline?