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| **CLASS REVISION TEST-4****SCIENCE - CHEMISTRY** |
| **EX.NO**  |  | **AD.NO** |  | **GRADE**  | **X-LAVENDER** |
| **DATE**  | **19/11/19** | **MARKS** | **80** | **TIME** | **3 Hrs** |

**SECTION - A**

**I. Choose the correct answer:- 10x1=10**

1. When copper powder is heated it gets coated with-

 a. black copper oxide b. yellow copper oxide

 c. red copper oxide d. None of these

2. When Ca(NO3)2 is heated, it gives CaO, NO2(g) and O2­(g) . The correct number of moles of

 Ca(NO3)2, CaO, NO2(g) and O2(g) are present in the reaction are respectively

 a. 2, 1, 3, 2 b. 2, 2, 4, 1 c. 2, 2, 2, 1 d. 1, 2, 4, 1

3. 2NaOH + MgSO4

 a. MgO + Na2SO4 b. Mg(OH)2 + Na2SO4

 c. Mg(OH)2 + Na2O d. MgO + Na2O

4. Plaster of Paris hardens by

 a. giving of CO2 b. changing into CaCO3

 c. combining with water d. giving out water

5. Silver articles become black on prolonged exposure to air. This is due to the formation of

 a. Ag3N b. Ag3O c. Ag2S d. Ag3S and Ag3N

6. When a metal is added to dilute HCl solution, there is no evolution of gas. Metal is-

 a. K b. Na c. Ag d. Zn

7. The elements with atomic number 2, 10, 8, 18, 36, 54 and 86 are all-

 a. halogens b. noble gases c. noble metals d. light metals

8. In the modern periodic table one of the following does not have appropriate position-

 a. transition elements b. inert gases

 c. inner transition elements d. halogens

9. A reaction scheme is shown below:

 

 What is the final product Z?

 a. A carboxylic acid b. An alcohol

 c. An alkene d. An ester

10. Which of the following is not the use of graphite?

 a. It is used as lubricant

 b. It is used in manufacturing of lead-pencils

 c. It is used in manufacturing of artificial diamond

 d. It is used for making insulated plates

**II. Answer in a word:- 5x1=5**

11. State one industrial application of reduction process.

12. Name the acid and base that have constituted the salt ammonium nitrate.

13. Why oxides of highly reactive metals cannot be reduced by carbon?

14. List any two properties of elements belonging to the first group of modem periodic table.

15. Write the number of covalent bonds in the molecule of propane, C3H6.

**III. Assertion and Reason:- 5x1=5**

**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 assertion is false but reason is true.

e. If both assertion and reason are false.

**16.** **Assertion :** The following chemical equation,

2C6H6 + $\frac{7}{2}$ O2 4CO2 + 3H2O is a balanced chemical equation.

 **Reason :**  In a balanced chemical equation, the total number of atoms of each may or may not

 equal on both side of the equation.

**17.** **Assertion :** Salts are the products of an acid-base reaction.

 **Reason :** Salt may be acidic or basic.

**18. Assertion :** When zinc is added to a solution of iron (II) sulphate, no change is observed.

 **Reason :** Zinc is less reactive than iron.

**19.** **Assertion :** Ionization enthalpy is the energy released to remove an electron from an isolated

gaseous atom in its ground state.

 **Reason :** Element has a tendency to lose of gain the electrons to attain the stable

configuration.

20. **Assertion :** Carbon monoxide is extremely poisonous in nature.

 **Reason :** Carbon monoxide is formed by complete combustion of carbon.

**SECTION - B**

**IV. Answer the following questions:- 10x3=30**

21. a. Write the essential condition for the following reaction to take place:

 2AgBr 2Ag + Br2

 b. Complete the following equation for the chemical recation:

 FeSO4(s) $→$ Fe2O3 + \_ \_ \_ + \_ \_ \_

 c. What happens when water is added to quicklime (CaO)? Write the chemical equation.

22. i. Solid calcium oxide was taken in a container and water was added slowly to it.

 a. Write the observations.

 b. Write the chemical formula of the product formed.

 ii. What happens when carbon dioxide is bubbled through lime water (a) in small amount (b) in excess?

23. Explain the action of dilute hydrochloric acid on the following with suitable chemical equations:

 a. Magnesium ribbon,

 b. Sodium hydroxide,

 c. Crushed egg shells.

24. Name the products formed in each case when:

 a. Hydrochloric acid reacts with caustic soda.

 b. Granulated zinc reacts with caustic soda.

 c. Carbon dioxide is passed through lime water.

25. a. Write the electron dot structure of Potassium (19) and Chlorine (17).

 b. Show the formation of KCl by transfer of electrons.

 c. Name the ions present in the compound, KCl.

26. Write the balanced chemical equation in each case:

 a. Mg metal is reacted with very, little amount of dilute HNO3.

 b. Aluminium powder is added to Fe2O3.

 c. Zinc sulphide is roasted.

 27. An element 'M' with electronic configuration (2, 8, 2) combines separately with (NO3)-, (SO4)2- and (PO4)3 radicals. Write the formula of the three compounds so formed. To which group and period of the Modern Periodic Table do the elements M belong to? Will M form covalent or ionic compounds? Give reason to justify your answer.

28. a. Explain the basic character of oxides of elements down the group and across the period.

 b. Describe the basic character of oxides of third period elements across the period from left to right.

29. An organic compound ‘P’ is a constituent of wine. ‘P’ on reacting with acidified K2Cr2O7 forms another compound ‘Q’. When a piece of sodium is added to ‘Q’ a gas ‘R’ evolves which burns with a pop sound. Identify P, Q and R and write the chemical equations of the reactions involved.

30. Write any three physical properties and three uses of ethanol.

**SECTION - C**

**V. Answer the following questions briefly:- 6x5=30**

31. 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.

32. State the reason for the following statements:

(i) Tap water conducts electricity whereas distilled water does not.

(ii) Dry hydrogen chloride gas does not turn blue litmus red whereas dilute hydrochloric acid does.

(iii) During summer season, a milk man usually adds a very small amount of baking soda to fresh milk.

(iv) For a dilution of acid, acid is added into water and not water into acid.

(v) Ammonia is a base but does not contain hydroxyl group.

33. a. Write electron dot diagrams of chlorine (At. No. 17) and calcium (At. No. 20). Show the formation of calcium chloride by transfer of electrons.

 b. Identify the nature of the above compound and explain three physical properties of such a compound.

34. a. The modern periodic table has been evolved through the early attempts of Dobereiner, Newland and Mendeleev. List one advantage and one limitation of all the three attempts.

 b. Name the scientist who first of all showed that atomic number of an element is a more fundamental property than its atomic mass.

 c. State Modern periodic law.

35. Complete the following chemical equations and write the chemical name of the products formed.

 

36. Give reasons for the following:

a. Element carbon forms compound mainly by covalent bonding.

b. Diamond has high melting point.

c. Graphite is good conductor of electricity.

d. Acetylene burns with sooty flame.

e. Kerosene does not decolourise bromine water whereas cooking oil does.