

GIRI SIR'S CLASSES
HATIGAON, GUWAHATI

CHEMICAL REACTIONS AND EQUATIONS REVISION TEST

Class 10 - Science

Time Allowed: 1 hour and 30 minutes

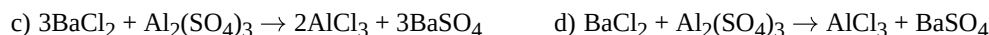
Maximum Marks: 50

General Instructions:

All the questions are compulsory.

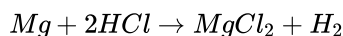
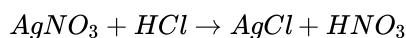
Section A

1. The drying agent used for ammonia gas is [1]
a) P_2O_5 b) Slaked lime
c) Quick lime d) Conc. H_2SO_4
2. The following reaction is an example of a [1]
 $4NH_{3(g)} + 5O_{2(g)} \rightarrow 4NO_{(g)} + 6H_2O_{(g)}$
i. displacement reaction
ii. combination reaction
iii. redox reaction
iv. neutralisation reaction
a) (ii) and (iii) b) (i) and (iv)
c) (i) and (iii) d) (iii) and (iv)
3. Pick out a decomposition reaction: [1]
a) $Fe_2O_3 + 3CO \rightarrow 2Fe + 3CO_2$ b) $C_2H_4 + H_2 \rightarrow C_2H_6$
c) $Cu + AgNO_3 \rightarrow Cu(NO_3)_2 + 2Ag$ d) $NH_4Cl \rightarrow NH_3 + HCl$
4. Which of the following is(are) an endothermic process(es)? [1]
i. Dilution of sulphuric acid
ii. Sublimation of dry ice
iii. Condensation of water vapours
iv. Evaporation of water
a) (iii) only b) (ii) and (iv)
c) (i) and (iii) d) (ii) only
5. Chemical formula of marble is [1]
a) $CaHCO_3$ b) CaC_2
c) $CaCO_3$ d) $Ca(OH)_2$
6. Identify the balanced chemical equation. [1]



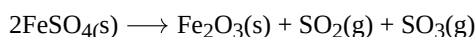
7. Name the brown coloured gas evolved when lead nitrate crystals are heated in a dry test tube. [1]

8. What is the difference between the reactions given below? [1]



9. Write an activity in support of a combination reaction. [1]

10. Consider the following reaction: [1]



Is it a redox reaction or not? If yes, why?

11. Define a displacement reaction. [1]

Section B

12. What is an ionic equation? [2]

13. An element A reacts with water to form a compound B which is used in white-washing. The compound B on heating forms an oxide C which on treatment with water give back B. Identify A, B and C and give the reaction involved. [2]

14. Give one example of combustion reaction. Is it exothermic or endothermic? [2]

15. A copper coin is kept immersed in a solution of silver nitrate for sometime. What will happen to the coin and colour of the solution? [2]

16. Give the characteristic tests for O₂. [2]

Section C

17. 2g of silver chloride is taken in a china dish and the china dish is placed in sunlight for some time. What will be your observation in this case ? Write the chemical reaction involved in the form of a balanced chemical equation. Identify the type of chemical reaction. [3]

18. A magnesium ribbon is burnt in oxygen to give a white compound X accompanied by emission of light. If the burning ribbon is now placed in an atmosphere of nitrogen, it continues to burn and forms a compound Y. [3]

(i) Write the chemical formulae of X and Y.

(ii) Write the balanced chemical equation when X is dissolved in water.

19. On heating blue coloured powder of copper (II) nitrate in a boiling tube, copper oxide (black), oxygen gas and a brown gas X is formed. [3]

i. Write a balanced chemical equation of the reaction.

ii. Identify the brown gas X evolved.

iii. Identify the type of reaction.

iv. What could be the pH range of the aqueous solution of the gas X?

20. What happens when dilute hydrochloric acid is added to iron filings? [3]

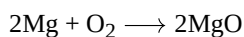
21. What happens when CaO is dissolved in water? [3]

Section D

Question No. 22 to 25 are based on the given text. Read the text carefully and answer the questions: [4]

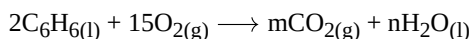
In a balanced chemical reaction, equal number of atoms are present on both sides of reaction. A balanced chemical reaction is based on law of conservation of mass which means that total mass of reactants and products participating in a reaction must be equal. For example, a balanced chemical equation of burning of magnesium in oxygen to form

magnesium oxide is written as:



The mass of reactants ($2 \times 24 + 32 = 80$) is equal to the mass of products [$2 \times (24 + 16) = 80$].

22. In a reaction, 35 g of reactant, PQ breaks down into 20 g of product, P and an unknown amount of product, Q. Find the amount of product Q.
23. The solid mercury (II) oxide is heated, and liquid mercury and oxygen gas are produced. Mention balanced chemical reaction.
24. Which laws are satisfied by a balanced chemical equation?
25. In the given chemical reaction,



Find the values of m and n respectively.

Section E

26. When the solution of substance A is added to a solution of potassium iodide, then a yellow solid separates out from the solution. [5]
- What do you think substance A would be?
 - Name the yellow substance which separates out.
 - Write the characteristic of chemical reactions which is illustrated by this example.
 - Write a balanced chemical equation for the reaction which takes place. Mention the physical states of all the reactants and products involved in the chemical equation.
27. What are the types of combination reactions ? Give example of each type. [5]