

**Class: X**  
**Subject: Chemistry**  
**Topic: Chemical reaction and equation**  
**No. of Questions: 20**  
**Duration: 60 Min**  
**Maximum Marks: 60**

**Question 1:** Which among the following is not a physical change?

1. Melting of solids to liquids
2. Vaporization of liquids to gases
3. Liquefaction of gases to liquids
4. Decay of matter

**Answer:** 4, decay is natural phenomenon

**Question 2:** Which among the following is not a chemical change?

1. Melting of ice
2. Carbon cycle
3. Dehydration of substances
4. Fermentation of substances

**Answer:** 1, Melting is a physical process

**Question 3:** Physical changes are \_\_\_\_\_.

1. temporary
2. permanent
3. irreversible
4. endothermic

**Answer:** 1

**Question 4:** An example of a chemical change is \_\_\_\_\_.

1. formation of clouds
2. glowing of an electric light
3. dropping sodium into water
4. dissolving of salt in water

**Answer:** 3, Na combines with water and forms NaOH with a hissing sound.

**Question 5:** Which of these will cause a chemical change to occur?

1. Grinding of wheat into flour
2. Lighting of a gas stove
3. Evaporation of water from a lake
4. Ringing of an electric bell

**Answer:** 2

**Question 6:** Chemical changes are \_\_\_\_\_.

1. temporary, reversible and a new substance is produced
2. always accompanied by exchange of light
3. permanent, irreversible and a new substance is produced
4. never accompanied by exchange of light and heat energy

**Answer:** 3

**Question 7:** Which of the following is a physical change?

1. Solubility in water
2. Combustibility
3. Aerial oxidation
4. Reaction with water

**Answer:** 1

**Question 8:** Which of the following information is conveyed by a chemical reaction?

1. The colour changes taking place
2. The structure of the reactants and products
3. The absorption of energy only
4. The masses of the reactants and products involved in the reaction

**Answer:** 4, law of conservation of mass

**Question 9:** Which is the correct symbol for manganese?

1. M
2. Ma
3. Mn
4. Mg

**Answer:** 3

**Question 10:** The symbol H stands for \_\_\_\_\_ of hydrogen.

1. one atom
2. one molecule
3. one ion
4. two atoms

**Answer:** 1

**Question 11:** The correct formula for nitrogen dioxide is \_\_\_\_\_.

1. NO
2. N<sub>2</sub>O
3. NO<sub>2</sub>
4. N<sub>2</sub>O<sub>5</sub>

**Answer:** 3

**Question 12:** The correct formula for ammonium sulphate is \_\_\_\_\_.

1.  $\text{NH}_4\text{SO}_4$
2.  $(\text{NH}_4)_2\text{SO}_4$
3.  $(\text{NH}_3)_2\text{SO}_4$
4.  $(\text{NH}_4)_2(\text{SO}_4)_2$

**Answer:** 2

**Question 13:** Which of the following is an incorrect formula?

1.  $\text{NaCl}_2$
2.  $\text{BaSO}_4$
3.  $\text{H}_2\text{CO}_3$
4.  $\text{P}_2\text{O}_5$

**Answer:** 1, For sodium chloride its  $\text{NaCl}$ .

**Question 14:** In one molecule of ammonium sulphide there are \_\_\_\_\_.

1. 2 atoms of N, 8 atoms of H, and 1 atom of S
2. 1 atom of N, 4 atoms of H, and 1 atom of S
3. 1 atom of N, 4 atoms of H, and 2 atoms of S
4. 2 atoms of N, 8 atoms of H, and 2 atoms of S

**Answer:** 1, formula is  $(\text{NH}_4)_2\text{S}$

**Question 15:** The correctly balanced equation for  $\text{FeS}_2 + \text{O}_2 \rightarrow \text{Fe}_2\text{O}_3 + \text{SO}_2$  is \_\_\_\_\_.

1.  $2\text{FeS}_2 + \text{O}_2 \rightarrow \text{Fe}_2\text{O}_3 + 4\text{SO}_2$
2.  $2\text{FeS}_2 + 3\text{O}_2 \rightarrow 2\text{Fe}_2\text{O}_3 + 4\text{SO}_2$
3.  $4\text{FeS}_2 + 4\text{O}_2 \rightarrow 2\text{Fe}_2\text{O}_3 + 2\text{SO}_2$
4.  $4\text{FeS}_2 + 11\text{O}_2 \rightarrow 2\text{Fe}_2\text{O}_3 + 8\text{SO}_2$

**Answer:** 4, Count the no. of atoms both the sides of the reaction.

**Question 16:** The sign used to indicate a reversible reaction is \_\_\_\_\_.

1.  $\rightarrow$
2.  $\rightleftharpoons$
3.  $\leftarrow$
4. Double arrow.

**Answer:** 4

**Question 17:** Breaking of lead bromide into lead and bromine is an example of \_\_\_\_\_.

1. decomposition reaction
2. synthesis reaction
3. displacement reaction
4. neutralisation reaction

**Answer:** 1

**Question 18:** In the equation  $\text{PbO}_2 + 4\text{HCl} \rightarrow \text{PbCl}_2 + 2\text{H}_2\text{O} + \text{Cl}_2$ , the substance undergoing oxidation is \_\_\_\_\_.

1. lead dioxide
2. hydrochloric acid
3. hydrogen
4. lead chloride

**Answer:** 2, The substance which add H to substrate are reducing agents and they themselves are oxidised.

**Question 19:**  $\text{NaCl} + \text{AgNO}_3 \rightarrow \text{AgCl} + \text{NaNO}_3$  is an example of \_\_\_\_\_.

1. neutralization reaction
2. redox reaction
3. double displacement reaction
4. decomposition reaction

**Answer:** 3, its double displacement reaction.

**Question 20:** In the reaction:

$\text{BaCl}_2 + \text{ZnSO}_4 \rightarrow \text{ZnCl}_2 + \text{BaSO}_4$ , the white precipitate seen is due to \_\_\_\_\_.

1.  $\text{ZnCl}_2$
2.  $\text{BaSO}_4$
3.  $\text{BaCl}_2$
4.  $\text{ZnSO}_4$

**Answer:** 2,  $\text{BaSO}_4$  is white precipitate.

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