



10TH SSC MCQ - CH - Chemical reactions and equations

DATE: _____

TIME: 1 Hrs 40 Min

MARKS: 100

SEAT NO:

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Note:-

1. All Questions are compulsory.
2. Numbers on the right indicate full marks.

Q.1 Which of the given chemical equations is balanced? (1)

- A) $\text{H}_2\text{O}_2 \rightarrow \text{H}_2\text{O} + \text{O}_2$ B) $\text{NaNO}_3 \rightarrow \text{NaNO}_2 + \text{O}_2$
C) $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$ D) $\text{Al}_2\text{CO}_3 \rightarrow \text{Al}_2\text{O}_3 + \text{CO}_2$

Ans : C

Q.2 Which of the following conditions is necessary for a chemical reaction? (1)

- A) It must be accompanied with change in temperature and pressure B) At least one of the reactants must be in a fixed quantity
C) It must follow the law of conservation of mass D) All of the above

Ans : C

Q.3 What is the reaction in which a substance or substances undergo change to produce new substances with new properties called? (1)

- A) A biochemical reaction B) A nuclear reaction
C) A physical reaction D) A chemical reaction

Ans : D

Q.4 In which reaction is an atom or a group of atoms present in a molecule displaced by another atom? (1)

- A) Displacement reaction B) Double decomposition reaction
C) Decomposition reaction D) Synthesis reaction

Ans : A

Q.5 In which reaction do two compounds exchange their ions to form two new compounds? (1)

- A) Displacement reaction B) Double displacement reaction
C) Synthesis reaction D) Decomposition reaction

Ans : B

Q.6 In which reaction does a solid get separated from the solution? (1)

- A) Neutralization reaction B) Precipitation reaction
C) Redox reaction D) All of the above

Ans : B

Q.7 Identify the substance which reduces a compound. (1)

- A) A hydrating agent B) A dehydrating agent
C) An oxidizing agent D) A reducing agent

Ans : D

- Q.8 In which reaction does the addition and the removal of oxygen takes place simultaneously? (1)
A) Oxidation reaction B) Reduction reaction
C) Redox reaction D) Precipitation reaction
- Ans : C**
- Q.9 Identify the type of reaction: $\text{H}_2 + \text{Cl}_2 \rightarrow 2\text{HCl}$ (1)
A) Decomposition reaction B) Combination reaction
C) Double displacement reaction D) Displacement reaction
- Ans : B**
- Q.10 Which of the following is a redox reaction? (1)
A) $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$ B) $\text{CuO} + \text{H}_2 \rightarrow \text{Cu} + \text{H}_2\text{O}$
C) $\text{CaO} + 2\text{HCl} \rightarrow \text{CaCl}_2 + \text{H}_2\text{O}$ D) $\text{NaOH} + \text{HCl} \rightarrow \text{NaCl} + \text{H}_2\text{O}$
- Ans : B**
- Q.11 Which of the following statements is correct about the given reaction? $\text{ZnO} + \text{CO} \rightarrow \text{Zn} + \text{CO}_2$ (1)
A) ZnO is being oxidized B) CO is being reduced
C) CO is being oxidized D) ZnO is being reduced
- Ans : D**
- Q.12 Which of the given reactions is an odd one? (1)
A) Carbon + Oxygen \rightarrow Carbon dioxide B) Hydrogen + Chlorine \rightarrow Hydrogen chloride
C) Glucose \rightarrow Carbon dioxide + Water D) Sulphur + Oxygen \rightarrow Sulphur dioxide
- Ans : C**
- Q.13 How is the decomposition of silver chloride carried out? (1)
A) By electricity B) By sunlight
C) By heat D) By water
- Ans : B**
- Q.14 Which metal can prevent the corrosion of tin? (1)
A) Zinc B) Copper
C) Lead D) Silver
- Ans : A**
- Q.15 Which gas is used in flush bags of chips to prevent oxidation? (1)
A) Helium B) Neon
C) Nitrogen D) Argon
- Ans : C**
- Q.16 Lime water turns milky when _____ gas is passed through it. (1)
A) H_2 B) CO
C) CO_2 D) SO_2
- Ans : C**

Q.17 The process of cellular respiration is _____ reaction. (1)

- A) endothermic B) reduction
C) redox D) decomposition

Ans : C

Q.18 A white precipitate will be formed if we add common salt solution to _____ solution. (1)

- A) KNO_3 B) AgNO_3
C) CuSO_4 D) Na_2SO_4

Ans : B

Q.19 The removal of oxygen from a reactant is called _____. (1)

- A) oxidation B) corrosion
C) rancidity D) reduction

Ans : D

Q.20 Chemical equations are balanced in accordance with the law of _____. (1)

- A) conservation of momentum B) conservation of mass
C) conservation of velocity D) conservation of speed

Ans : B

Q.21 Which of the following is an exothermic reaction? (1)

- A) electrolysis of water B) cellular respiration
C) process of photosynthesis D) conversion of lime stone into quicklime

Ans : B

Q.22 Which of the following is an exothermic process? (1)

- A) melting of ice B) dissolution of KNO_3 in water
C) dissolution of NaOH in water D) decomposition of CaCO_3

Ans : C

Q.23 Dissolution of potassium nitrate in water is a _____. (1)

- A) oxidation reaction B) reduction reaction
C) exothermic process D) endothermic process

Ans : D

Q.24 The colour of the precipitate formed when potassium chromate reacts with barium sulphate is _____. (1)

- A) white B) yellow
C) brown D) red

Ans : B

Q.25 The reaction of zinc dust with copper sulphate solution is an example of _____. (1)

- A) combination reaction B) decomposition reaction
C) displacement reaction D) double displacement reaction

Ans : C

Q.26 $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$ is a _____ reaction. (1)

- A) combination B) displacement
C) double displacement D) decomposition

Ans : D

Q.27 Which of the following is not a balanced chemical equation? (1)

- A) $2\text{Mg} + \text{O}_2 \rightarrow 2\text{MgO}$ B) $\text{NH}_3 + \text{HCl} \rightarrow \text{NH}_4\text{Cl}$
C) $\text{NaOH} + \text{H}_2\text{SO}_4 \rightarrow \text{Na}_2\text{SO}_4 + \text{H}_2\text{O}$ D) $\text{SO}_2 + 2\text{H}_2\text{S} \rightarrow 3\text{S} + 2\text{H}_2\text{O}$

Ans : C

Q.28 Which of the following cannot be changed while balancing a chemical equation? (1)

- A) molecular formula B) number of atoms
C) number of molecules D) mass of the reactants

Ans : A

Q.29 Copper on reaction with dilute nitric acid gives _____ gas. (1)

- A) nitrogen B) nitrogen dioxide
C) hydrogen D) nitric oxide

Ans : D

Q.30 The catalyst used in the preparation of Vanaspati ghee from vegetable oil is _____. (1)

- A) H_2 B) MnO_2
C) Ni D) O_2

Ans : C