परमाणु ऊर्जा शिक्षण संस्था
Atomic Energy Education Society
उत्तर कुंजी / Answer Key (2025-26)

कक्षा /Class: VII **विषय /Subject: Science** **अंक/Marks: 40**

दिया गया पाठ्यक्रम/Portion covered: Chapter:5 Changes Around Us: Physical & Chemical

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SECTION: A

Multiple choice questions. **1x10=10**

1.. d. melting of wax
2 b. Chemical change
3. d. All of these
4. d. (b) and (c) are true
5. b. Galvanization
6. b. Change in state
7. b. Physical change
8. b Rust
9. d All of the above
10. d All of the above

SECTION: B

11. a. Both Assertion and Reason are true, and the Reason is the correct explanation of the Assertion
12. a. Both Assertion and Reason are true, and the Reason is the correct explanation of the Assertion
13. d. Assertion is false, but Reason is true.
14. c. Assertion is true, but Reason is false.

SECTION: C

15. b) Physical
16. d) Chemical change
17. c) Freezing of water
18. c) Physical changes do not alter the composition of substances

SECTION: D

Short answer questions. 5*2=10

19. i Magnesium reacts with oxygen in the air.
ii.It burns with a bright white flame.
iii. A white powdery substance called magnesium oxide (MgO) is formed.
20. One useful chemical change in our daily life is:
Cooking of food

➢ When we cook food, new substances are formed, and the raw ingredients change chemically.

. . ➢ This change cannot be reversed, making it a chemical change.

21. i) Galvanization is the process of coating iron or steel with a thin layer of zinc to prevent rusting.

ii)Zinc acts as a protective layer and prevents air and moisture from coming in contact with iron.

iii) Even if the zinc layer gets scratched, zinc corrodes instead of iron (this is called sacrificial protection)

22. Definition of physical change

A **physical change** is a change in which **no new substance** is formed. Only the **physical properties** like shape, size, or state of matter change. These changes are usually **reversible**

Two Examples of Physical Change:

Melting of Ice – Ice melts to form water, but it is still H_2O.

Boiling of Water – Water turns into steam, but no new substance is formed.

23. **Two Differences between Physical and Chemical Change:**

Physical Change	Chemical Change
1. No new substance is formed.	1. A new substance is formed.
2. Usually reversible in nature.	2. Usually irreversible in nature.

SECTION: E

24. Magnesium burns with a bright white flame and forms magnesium oxide (MgO).

Chemical Change: A new substance (MgO) is formed, and the change is irreversible.

25. Physical Change: Melting of wax.

Chemical Change: Burning produces carbon dioxide, heat, light, and new substances.

26.Rusting forms a new substance (iron oxide) with different properties.

It is irreversible and involves a chemical reaction.

Conditions:

Presence of air (oxygen)

Presence of water (moisture)

27. The formation of soil from rocks involves both physical and chemical changes. Natural factors like wind, rain and temperature break down rocks into smaller pieces (physical change), while chemical processes, like weathering, also change the minerals in the rocks (chemical change). Both types of changes work together to form soil.