

# Class 10 – Science

## MQP SET-3: ANSWER KEY

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### SECTION A – MCQs (1×20)

1. **C** – Less than 7
  2. **C** – Plane mirror
  3. **A** – Coulomb
  4. **C** – Growth hormone
  5. **C** – Sodium
  6. **B** – Gypsum
  7. **B** – Virtual and erect
  8. **C** – Silicon
  9. **C** – Oviduct
  10. **B** – Carbon dioxide
  11. **B** – Joule
  12. **C** – Silver
  13. **B** – Fermentation
  14. **B** – Dioptre
  15. **C** – Lactic acid
  16. **C** – Concave mirror
  17. **B** – Chlorophyll
  18. **C** – Excretion
  19. **C** – Iron
  20. **D** – Cell
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## SECTION B – Very Short Answer (2 marks each)

### 21. Centre of curvature of a mirror

The **centre of curvature** is the centre of the sphere of which the mirror surface forms a part.

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### 22. Biodegradable substance

Biodegradable substances are those which **can be decomposed by microorganisms** into simpler substances.

**Example:** Vegetable waste.

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### 23. Hormone controlling metabolism

The hormone that controls metabolism is **thyroxine**.

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### 24. One use of washing soda

Washing soda is used for **softening hard water**.

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### 25. Electric potential difference

Electric potential difference is the **work done in moving a unit charge from one point to another**.

$$V = \frac{W}{Q}$$

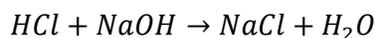
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## SECTION C – Short Answer (3 marks each)

### 26. Neutralization reaction

A neutralization reaction is a reaction between an **acid and a base** to form **salt and water**.

**Example:**



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### 27. Convex lens (object at infinity)

- Rays parallel to principal axis
- After refraction, meet at **principal focus (F)**
- Image is **real, inverted and highly diminished**  
(Exam me neat labelled ray diagram banana hai)

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### 28. Electric resistance

Electric resistance is the **opposition offered to the flow of current** in a conductor.

**One factor:** Length of conductor

**SI unit:** Ohm ( $\Omega$ )

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### 29. Two functions of human lungs

1. Help in **exchange of gases**
2. Supply oxygen to blood and remove carbon dioxide

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### 30. Reactivity series

The reactivity series is a list of metals arranged in **decreasing order of reactivity**.

**Importance:**

- Predicts displacement reactions
- Helps in extraction of metals

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### 31. Food chain

A food chain shows the **transfer of energy** from one organism to another.

**Example:**

Grass → Goat → Lion

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## SECTION D – Long Answer (5 marks each)

### 32. Digestion in human stomach

- Food is churned by stomach muscles
  - **Hydrochloric acid (HCl)** kills bacteria
  - **Pepsin enzyme** digests proteins
  - Food becomes semi-liquid called **chyme**
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### 33. Electric power

Electric power is the **rate at which electrical energy is consumed.**

$$P = VI$$

Using Ohm's Law:

$$P = I^2R \text{ and } P = \frac{V^2}{R}$$

**SI unit:** Watt (W)

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### 34. Male reproductive system (Humans)

It consists of:

- Testes
- Vas deferens
- Urethra
- Penis

**Function:** Production and transport of sperms

*(Diagram compulsory in exam)*

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### 35. Five uses of metals

1. Making electrical wires
2. Utensils
3. Machinery
4. Vehicles

5. Construction materials

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**36. Refraction of light**

Refraction is the **bending of light** when it passes from one medium to another due to change in speed.

*(Neat ray diagram compulsory)*

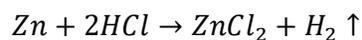
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**SECTION E – Case Based Question (7 marks)**

**37. Acids, Bases and Salts Case Study**

a) Gas evolved: **Hydrogen**

b) Chemical equation:



c) Type of reaction: **Displacement reaction**

d) One use of hydrogen: **Used as fuel**

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