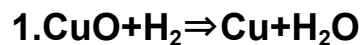
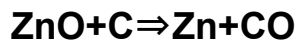


2025-26
DISTRICT COMMON EXAMINATION BOARD
DR. B. R. AMBEDKAR KONASEEMA DISTRICT, AMALAPURAM
SUB: PHYSICAL SCIENCE (EM)
Pre SA-1 KEY



Or



Or any other related equation.

2. Red colour

3. Reduction

4. A



5.

6. 1:2

7. C

8. 9Ω

9. Alkanes: C_2H_6 , CH_4 , C_3H_8

Alkenes: C_3H_6

Alkynes: C_3H_4 , C_2H_2

10. Power of lens, $P = 100 / f$

$$f = 100 / (-2)$$

$$= -50 \text{ cm}$$

Negative sign indicates concave lens.

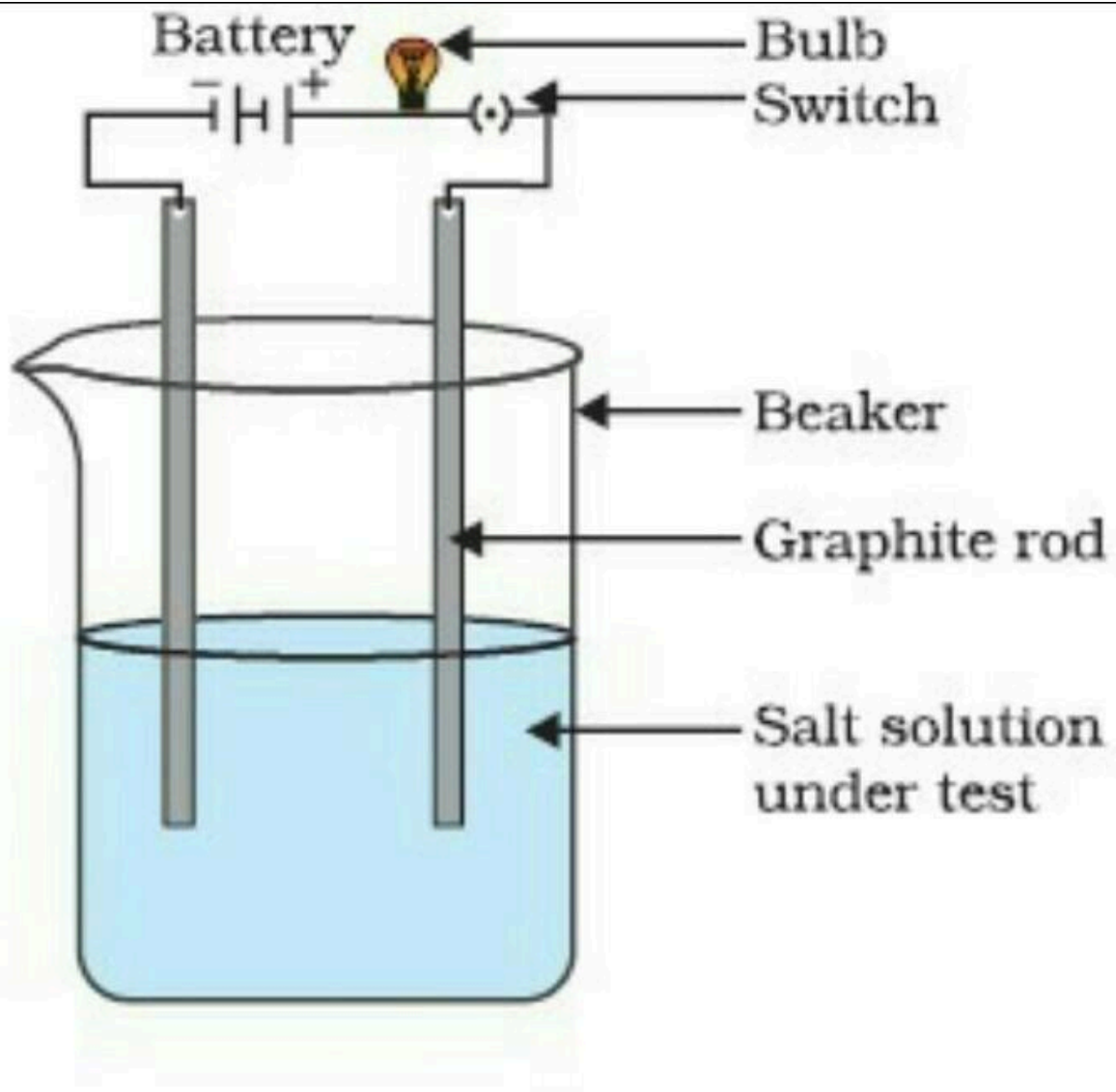
11. . We could not use fans, TVs, refrigerators, or computers etc

Or

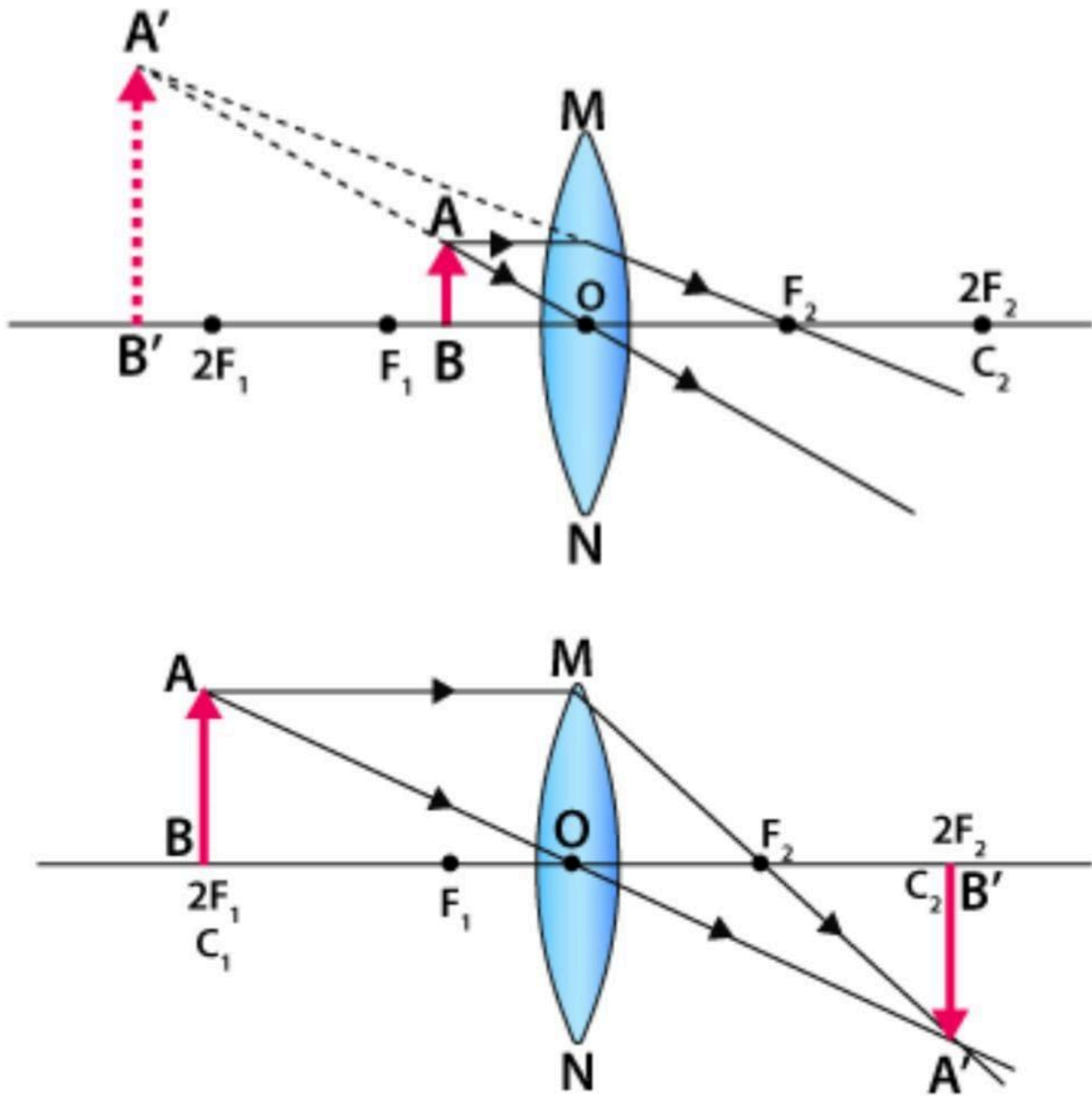
We have no TVs, No mobile phones, no computers, no refrigerators etc...

(Any two)

12a)



12b)



13. pH Applications:-

1. Maintaining healthy soil for plants
2. Preventing Tooth decay
3. Ensuring proper digestion in humans.
4. Self defence mechanism of plants and animals.

14.

Position of the object	Position of the image	Size of the image	Nature of the image
Beyond C	Between F and C	Diminished	Real and inverted
At C	At C	Same size	Real and inverted
At F	At infinity	Highly enlarged	Real and inverted
Between P and F	Behind the mirror	Enlarged	Virtual and erect

15a) \Rightarrow Hypermetropia is also called for far-sightedness.

\Rightarrow people cannot see nearby objects clearly.

\Rightarrow They can see distant objects clearly.

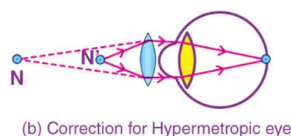
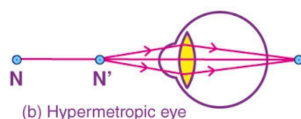
\Rightarrow This defect is also called farsightedness.

\Rightarrow Image will be formed beyond the retina.

\Rightarrow This defect may arise due to the focal length of the eye lens being too long or the eyeball becoming too small.

\Rightarrow Convex lenses are used to correct hypermetropia.

\Rightarrow The focal length of the lens used for correction is $f = 25d / d - 25$.



15b

Ans: i) Electric current

The net charge flows across any cross-section of a conductor in unit time is called electric current.

$$I = Q/t$$

The SI unit of electric current is ampere.

ii) Potential difference

The amount of work done in moving a unit positive charge from one point to another point in the field.

$$V = W/Q$$

SI unit of potential difference is 'volt'.

iii) **Ohm's law**

The potential difference across the ends of a resistor is directly proportional to the current through it, provided its temperature remains the same.

$$V=IR$$

SI unit of resistance is 'ohm'.

iv) **Electric power**

The rate of doing electric work is called electric power .

$$P = V I$$

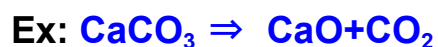
The SI unit of electric power is 'watt'.

16a) **Combination reaction**: A reaction in which a single product is formed from two or more reactants is known as a combination reaction.



2. **Decomposition reaction**: A reaction in which a single substance decomposes to give two or more substances is known as decomposition reaction.

heat



3) **Displacement reaction**: The reaction in which an element has displaced or removed another element from the molecule is called displacement reaction.



4) **Double displacement reaction**: The reaction in which there is an exchange of ions between the reactants are called double displacement reactions.



16b)

Ethanol	Ethanoic acid
1.It is a neutral compound.	1.It is an acidic compound.

2.It does not react with metal carbonates.	2.It reacts with metal carbonates.
3.It does not give brisk effervescence	3.It gives brisk effervescence
4.It is oxidised.	4.It is not oxidised
5.It has pleasant smell	5.It has pungent smell
6.Its melting point is lower than ethanoic acid	6.Its melting point is higher than ethanol
7.Its boiling point is lower than ethanoic acid	7.Its boiling point is higher than ethanol

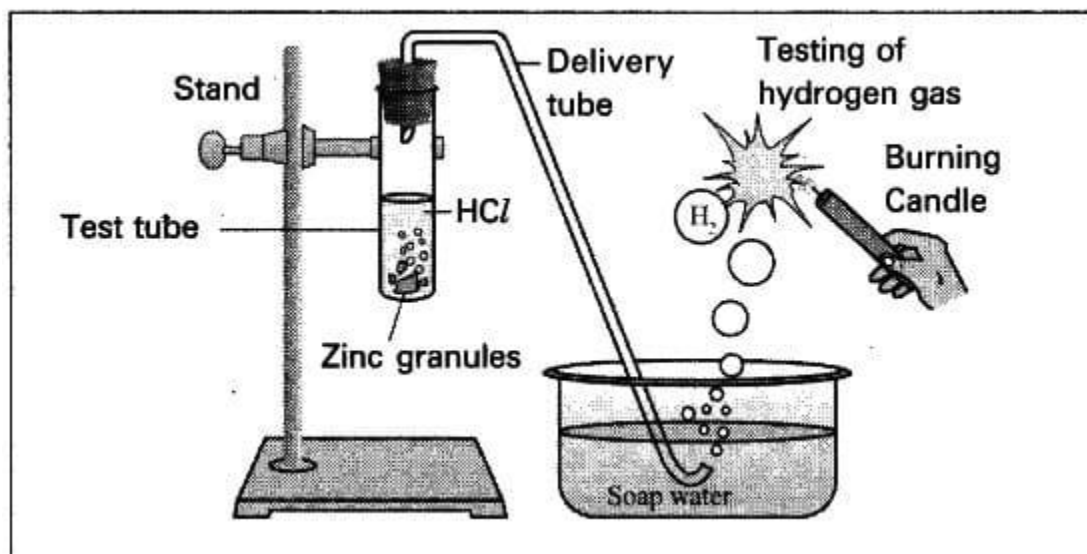
17a) Aim: to show that acids produce hydrogen gas reacted with metals.

Required materials: test tube, delivery tube glass trough, candle, soap water, dilute H_2SO_4 , zinc granules.

Procedure:

- i) Set the apparatus as shown in figure.
- ii) Take about 5 mL of dilute sulphuric acid in a test tube and add a few pieces of zinc granules to it.
- iii) We observe a gas is evolved from the zinc granules
- iv) Pass the gas being evolved through the soap solution.
- v) We observe some bubbles formed in the soap solution.
- vi) Take a burning candle near the gas filled bubble.
- vii) The candle turns off with a pop sound.
- viii) The pop sound indicates that the gas evolved is H_2 .

ix) Repeat this experiment with remaining acids



Conclusion/Observation: We conclude that hydrogen gas is produced when acid reacts with metals

17b)

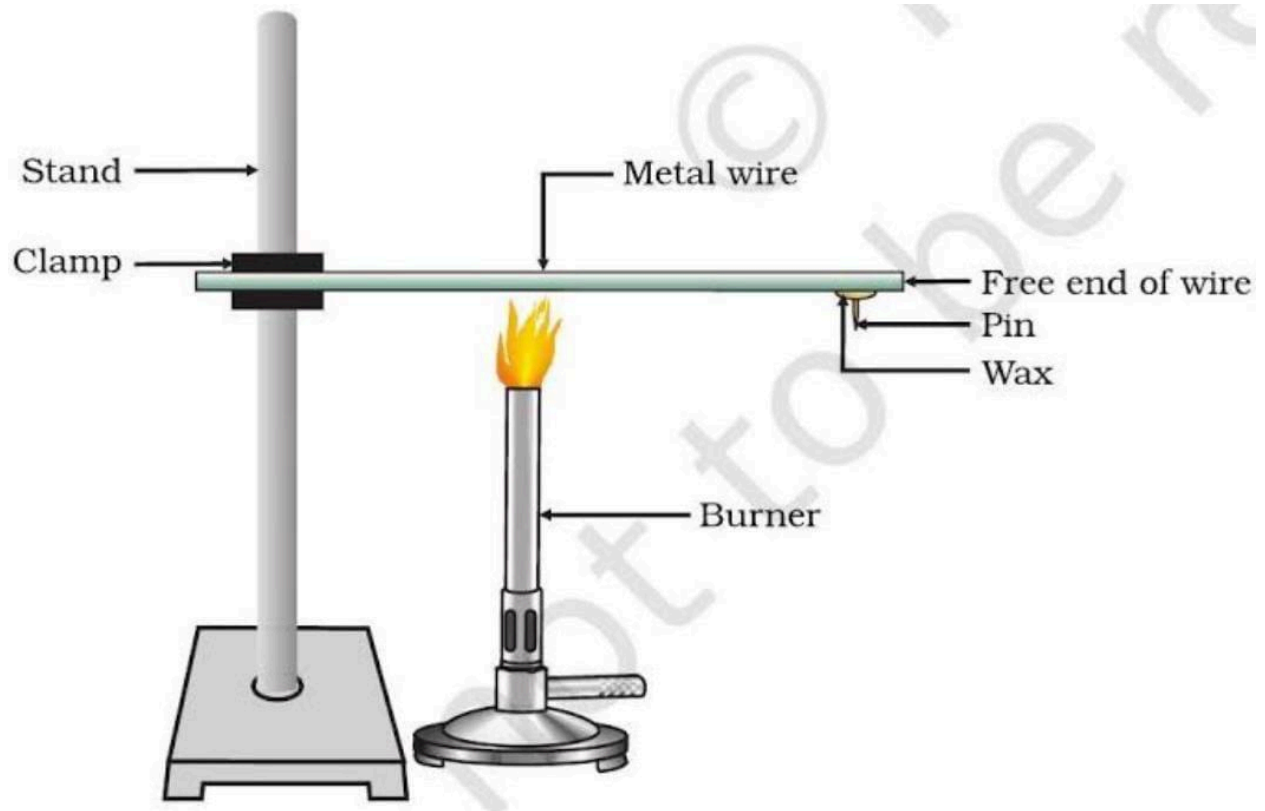
Aim: To show that metals are good conductors of heat.

Required Materials: Copper/Aluminium wire, Stand, Clamp, Burner

Procedure: i) Take an aluminium or copper wire.

ii) Clamp this wire on a stand, as shown in Fig. iii) Fix a pin to the free end of the wire using wax

iv) Heat the wire with a spirit lamp, candle or a burner near the place where it is clamped.



Observations:

When aluminium or copper wire is heated at one end, heat reaches the other end, melting the wax and the pin gets detached.

ii) metals are good conductors of heat.