SSC Examination

Physical Science: Most Important

Long Questions :- [6 Marks]

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1. Factors that influence ionization energy.
2. Experimental procedure to verify ohm's law.

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3. Differences between convex and concave mirrors
4. List out the materials required and experimental procedure in the experiment for observing the types of images and measuring the object distance and image distance from the concave mirror.
5. Postulates and limitations of Bohr's atomic model.
6. Explain how does the periodic properties of elements of ionization energy and atomic size changes in groups and periods in the modern periodic table
7. Explain the formation of boron-tri-fluoride molecule by hybridization.
8. Explain the formation of N_2 and O_2 molecules by using valence bond theory.

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9. How do you verify that resistance of a conductor of uniform cross-section area is proportional to the length of the conductor and explain it at constant temperature

10. List out the material required to conduct Oersted experiment with precautions and explain the experimental procedure.

11. The radius of curvature of a concave mirror is 6cm. Draw the ray diagram for an object placed on principal axis at 8cm and 4 cm. distance infront of the mirror.

12. Hydrogen reacts with oxygen to produce water. What will be mass of the water produced if 100gms of Hydrogen Participated in the reaction? Calculate the number of molecules of water produced in this reaction.
[Atomic masses: H = 1u, O = 16u].

13. Write the required materials and experimental procedure for the experiment, "Hydrochloric acid reacts with Zn pieces and liberates H_2".

14. Explain the behaviour of light rays in any four situations of their incidence on a convex lens.

15. Draw the ray diagram to form the image when the object is placed between F and C on the principle axis of a convex lens. Explain the characteristics of the image formed.

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An object at infinity with a height of 12 cm is placed infront of a convex lens and forms a point image. Draw the ray diagram and write the characteristics of the image

17. Explain the formation of rainbow

18. Draw the diagram of myopia and hypermetropia defect in human eye and also draw its correction

19. Explain Hunds rule with electronic configuration of carbon and Aufbau principle with moeller chart.

20. Importance of quantum numbers in predicting the positions of an electron in an atom.

21. Working process of induction stove

22. Explain the precautions to be taken in the experiment to show air and water are essential for rusting iron articles

23. Write the names of any three types of chemical reactions of carbon compounds and give examples.

24. Explain the cleansing action of soap.

25. Explain hund's rule with electronic configuration

26. Explain the Experimental procedure to show $\frac{V}{I}$ is constant for a Conductor and mention the precautions

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SHORT ANSWER QUESTIONS ★★★

1. The Magnification of the image by the convex lens is 2, then write characteristics of the image.
2. Write the chemical equation of the reaction, when Hydrogen react with oxygen and forms water. Balance the equation
3. Explain the use and nature of antacids.
4. Write the uses of lenses in day to day life.
5. During the sunset and sun-rise, Sun appears red. Why?

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6. Explain Aufbau principle with examples.
7. How do you correct the eye defect myopia?
8. Write the electronic configuration of Na^+ and Cl^-
9. Explain ionic bond with suitable example.
10. Differences between ohmic and non-ohmic conductors.
11. Applications of Faraday's "Electromagnetic Induction".
12. Physical methods of concentration of the ore.

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13. Differences between roasting and calcination
14. Write precautions to prevent corrosion of metals in your daily life.

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15. Write the types of Allotropes of Carbon.

16. Write the IUPAC names of the following compounds

(i) $CH_3-\underset{\displaystyle CH_3}{\underset{|}{CH_2}}-CH-CH_3$

(ii) $CH_3-CH_2-CH_2-CH=CH_2$

(iii) $CH_3-\underset{\displaystyle O}{\underset{\|}{C}}-CH_2-CH_3$

(iv) $CH_3-\underset{\displaystyle Cl}{\underset{|}{CH}}-CH=CH_2$

17. Write the general formula of Alkanes.

18. Mention the names of unsaturated hydrocarbons

19. Write the homologous series of Alkynes.

20. Write the formula of Hexyne.

21. A bulb is marked as 60 W and 240 V, then find the resistance (R) of the bulb if current flows through it in normal condition

22. Write the uses of washing soda in day to day life

23. Write the uses of bleaching powder in day to day life

24. Write the uses of baking soda.

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VERY SHORT ANSWERS QUESTIONS.

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1. Write the uses of convex mirror in day to day life.
2. Write the required material in the experiment 'acids reacts with metals'.
3. What would happen if ciliary muscles do not function properly?
4. What would happen, if human eye lens does not undergo 'accomodation'?
5. Draw the ray diagram
6. What happens if the magnetic field cannot apply force on current carrying wire?
7. Write two uses of nano tubes?

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8. Write the uses of graphite in day to day life
9. Write the uses of ethanol in day to day life
10. Write the required materials, chemicals for "esterification reaction" activity
11. List out the materials required to prove corrosion of iron occurs in presence of water and air.

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12. What would happen, if the metals like copper and iron do not get oxidized?

13. Write the daily life application of Faraday's law of electromagnetic field.

14. What happens when a current carrying coil/wire is placed in a magnetic field?

15. What will happen if household electric appliances are connected in series?

16. Draw the lewis electron dot structure for the Nitrogen and Chlorine atoms.

17. Does the focal length of lens is same in all media?

18. Write the uses of plaster of paris?

19. What happens, if Sulfuric acid (H_2SO_4) is used instead of Hydrochloric acid (HCl)

20. Write the uses of spherical mirrors.

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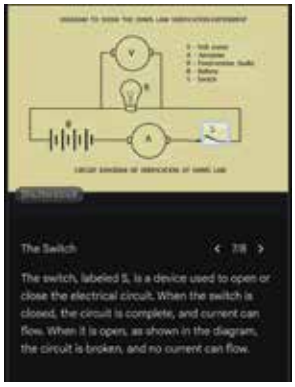
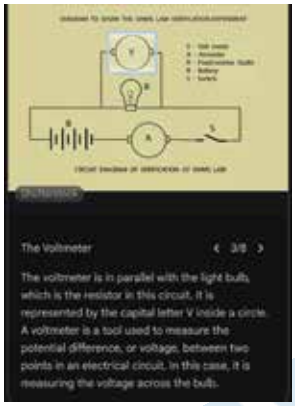
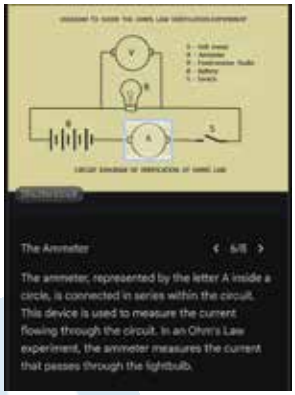
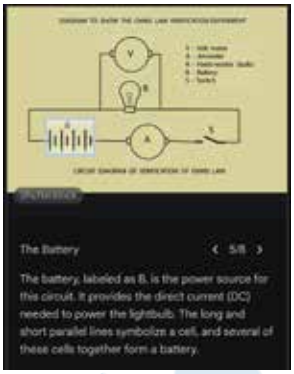
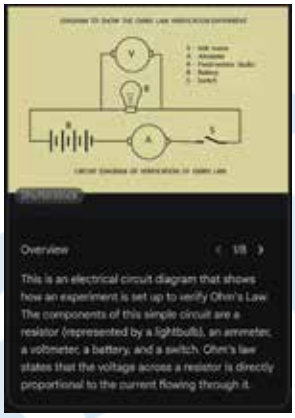
Most Important Diagrams

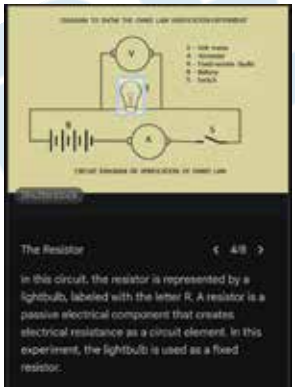


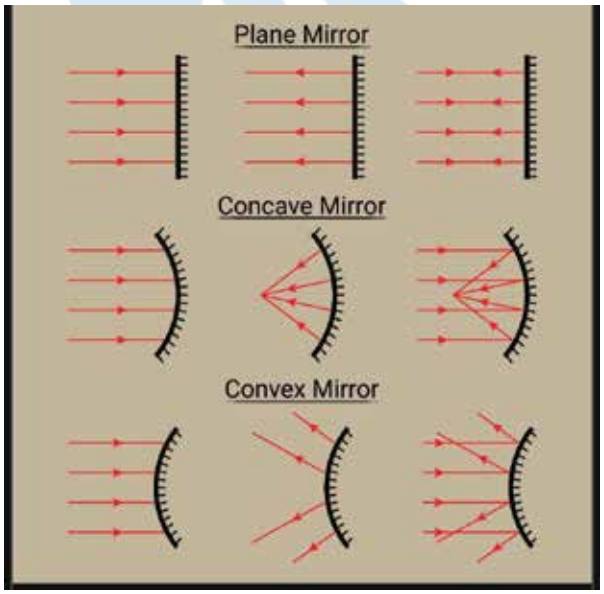


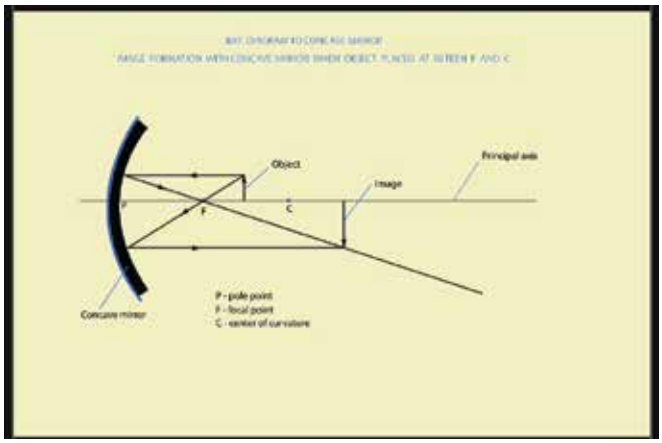


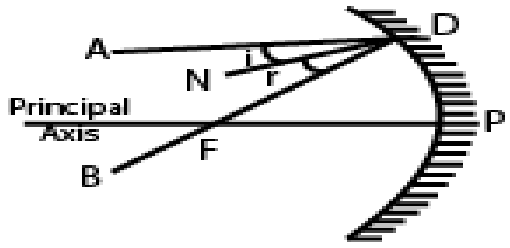




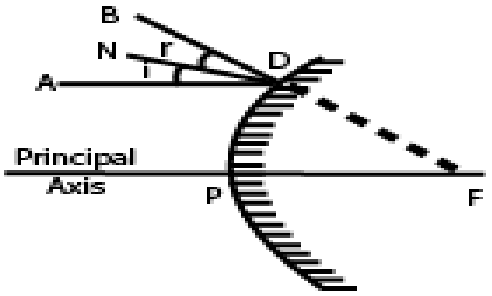




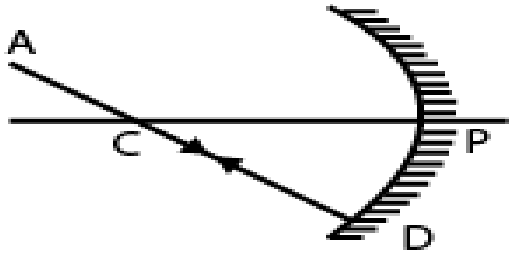




(a) Concave Mirror



(b) Convex Mirror



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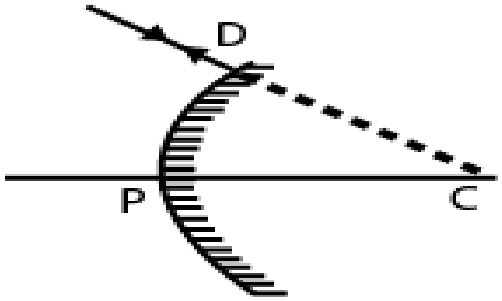
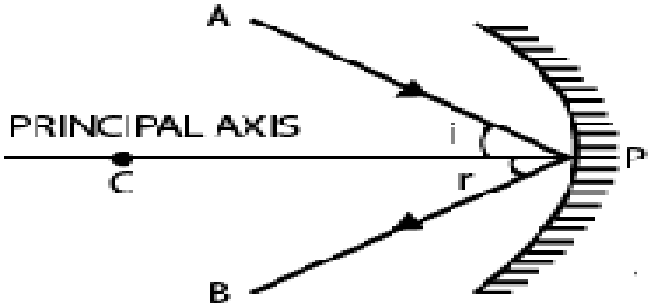


(b) Convex Mirror



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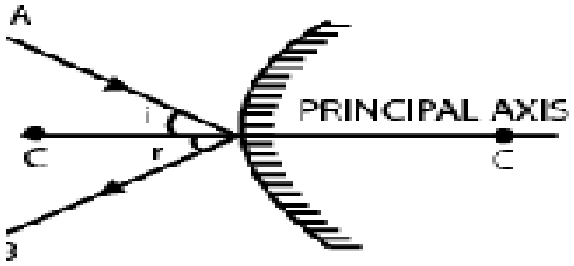

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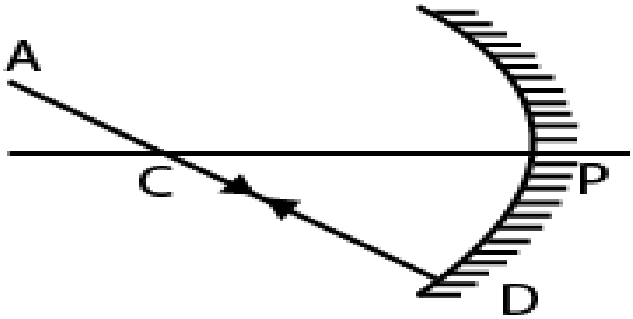

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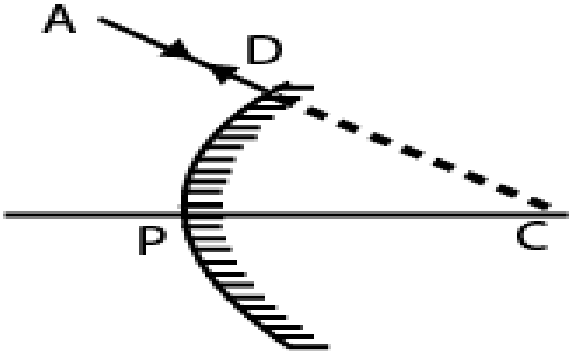

(b) Convex Mirror

Plane Mirror (diagram on page 1)