



FUSCO'S SCHOOL (ICSE)

Indiranagar, Bangalore

Half Yearly Examination 2016-17

Subject : PHYSICS

Class: VIII

Marks:80

SECTION - A

I. Answer the following :

10 x1=10

- What is a lens made up of?
- How many centres of curvatures exists for a lens?
- Describe the shape of a convex lens
- Which type of lenses are converging in nature?
- Define focal length of a lens
- What are renewable sources of energy?
- What is induced current?
- Write any two magnetic materials
- What do you understand by the term latent heat
- Write any two uses of an electro magnet

II. Fill in the blanks

[10]

- Magnetic(lines/poles) always exist in pairs.
- The magnetic strength is(maximum/minimum)at poles of the magnet.
- A magnet attracts.....(iron/glass) pieces.
- A(step up/step down)transformer is used to reduce the alternating voltage
- The SI unit of heat energy is(joule/newton)
- heat is a form of.....(force/energy)
-(Water/Petrol) is used as a coolant in car radiators.
- We feel cool under a fan during summers because of.....(freezing/evaporation)
-(convex/concave) lens is used as a burning glass.
- The image that can be obtained on the screen is called.....(real/virtual)image.

III. a)Differentiate between temporoary magnet and permanent magnet (any two points) [2]

b)What happens when a north pole of a magnet is brought near i)the north pole ii) the south pole of a freely suspended magnet? [2]

c)A freely suspended magnet always come to rest in north-south direction. Give reason. [2]

d)What are magnetic lines of force ?write any two properties of magnetic lines of force [2]

e)Differentiate between heat and temperature(any two points) [2]

IV. Differentiate between the following [10]

1. Heat capacity and specific heat capacity
2. Boiling and evaporation
3. Melting point and Freezing point
4. Latent heat and specific latent heat
5. Potential energy and Kinetic energy

SECTION- B

V. a) Define refraction and state the laws of refraction [3]

b) Draw a neat labelled diagram of an electric bell [3]

c) What is electro magnetic induction. Describe in brief the main observations made by Faraday about this effect. [4]

VI. a) Draw the three rules needed to draw ray diagrams for the formation of images by (i) a convex lens and (ii) a concave lens [2x3=6]

b) How is evaporation different from boiling? Why is evaporation always accompanied by cooling? [4]

VII. a) Define refraction and state the laws of refraction [3]

b) Javed has three thin pieces of glass, of which one is a plane glass, the second one is a convex lens and the third one is a concave lens. It is difficult to identify their nature by touch or direct observation. Help Javed in identifying the nature of the three glasses. [3]

c) Draw neat labelled diagrams of (i) step up and (ii) step down transformers [4]

VIII. a) Tarak has decided to buy two solar devices for his home to cut down his monthly expenses on energy consumption. Suggest any two solar devices and explain why they would be the best for him [3]

b) Differentiate between a convex lens and a concave lens [3]

c) Solve

1. Calculate the work done by a boy in lifting a 10 kg laptop from the ground and keeping it on a shelf 1.5 m high.
2. Heat of 5300 J needs to be provided to a certain amount of water to raise its temperature by 1°C . Calculate the mass of water, given the specific heat capacity of water is $4200\text{J/kg}^{\circ}\text{C}$. [4]