



DELHI PUBLIC SCHOOL(JOKA) SOUTH KOLKATA
SESSION: 2019 -2020
CLASS – XII

PHYSICS

WEEKLY TEST- I

Theory:

- 1. Electric Charges and Fields**
- 2. Electrostatic Potential and Capacitance**
- 3. Current Electricity**

Practicals:

1. To determine resistance per cm of a given wire by plotting a graph of potential difference versus current.
2. To find resistance of a given wire using metre bridge and hence determine the specific resistance of its material.
3. To verify the laws of combination (series) of resistances using a metre bridge.
4. To verify the laws of combination (parallel) of resistances using a metre bridge.

Activities:

1. To assemble the components of a given electrical circuit.
2. To study the variation in potential drop with length of a potentiometer wire for a steady current.

WEEKLY TEST- II

Theory:

- 4. Magnetic effects of current**
- 5. Magnetism**
- 6. Electromagnetic induction**
- 7. Alternating current**

Practicals:

5. To compare the emf of two given primary cells using potentiometer.
6. To determine the internal resistance of given primary cell using potentiometer.
7. To determine resistance of a galvanometer by half-deflection method and to find its figure of merit.

Activities:

3. To observe refraction and lateral deviation of a beam of light incident obliquely on a glass slab.
4. To observe polarization of light using two Polaroids.

MIDTERM EXAMINATION

(Theory = 70, Practicals = 30, Total=100)

Theory:

Previous Syllabus

8. Electromagnetic waves
9. Ray Optics
10. Wave optics
11. Dual nature of radiation

Practicals:

Previous Experiments

8. To find the focal length of a concave mirror by determining different values of u and v .
9. To find the focal length of a convex mirror, using a convex lens.
10. To find the focal length of a convex lens by plotting graphs between u and v or between $1/u$ and $1/v$.
11. To find the focal length of a concave lens, using a convex lens.

Activities:

5. To study the nature and size of the image formed by (i) convex lens (ii) concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).

WEEKLY TEST- III

Theory:

12. Atoms
13. Nuclei
14. Electronic Devices

Practicals:

12. To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation.
13. To determine refractive index of a liquid using convex lens and plane mirror.
14. To draw the I-V characteristic curve of a p-n junction in forward bias and reverse bias.
15. To draw the characteristic curve of a zener diode and to determine its reverse break down voltage.

Investigatory Project: Students need to perform investigatory experiment on the topic provided and maintain the records in a file.

PREBOARD EXAMINATION

(Theory = 70, Practicals = 30, Total=100)

Theory:

Complete Syllabus

Practicals:

Complete Syllabus (Students are to produce complete practical record, activity record and investigatory project file).