

# Practical Syllabus for Class +2 (Non-Medical & Medical)

## Physics

### Sec-A

1. To find the resistance of a given wire using meter bridge and hence determine the specific resistance of its material.
2. To determine the resistance per cm. of a given wire by plotting a graph of potential difference versus current.
3. To verify the laws of combination (series/parallel) of resistance using meter bridge.
4. To convert the given galvanometer (of known resistance the figure of merit) into an ammeter of (0-3A) range and to verify the same.
5. To convert the given galvanometer (of known resistance the figure of merit) into a voltmeter of (0-3V) range and to verify the same.

### Sec-B

6. To find the value of  $v$  for different values of  $u$  in case of concave mirror and to find its focal length.
7. a) To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation.
8. b) To determine the refractive index of the material (glass) of the prism.
9. To find the focal length of a convex lens by plotting graph between  $u$  and  $v$  or between  $1/u$  and  $1/v$ .
10. To study the I-V characteristics curve of a p-n Junction diode in forward bias and reverse bias.
11. To draw the characteristics curve of a zener diode and to determine its reverse break down.

## Chemistry

1. Surface chemistry (All).
2. Chemical kinetics (All).
3. Thermo chemistry (Enthalpy of neutralization of HCl and NaOH)
4. Electrochemistry (All).
5. Chromatography (All).
6. Preparation of Inorganic compounds (All).
7. Preparation of organic compounds (All).
8. Test for functional group.
9. Test for carbohydrate, fat, protein.
10. Volumetric Analysis.
11. Inorganic Analysis.

## Physical Education

1. Athletics track
  - a) Long Jump
  - b) Shot put
2. Basket Ball
3. Hockey
4. Football
5. Volley Ball
6. Hand Ball
7. Kho-Kho
8. Rifle Shooting

# **Biology**

## **List of Experiments**

### **Section-A**

- A1. Study of Pollen germination on a slide.
- A2 (a) Collect and study soil from different sites and study them for texture and moisture content.  
(b) Study the PH and water holding capacity of soil. Correlate it with the kinds of plants found in them.
- A3. Collect water from two different water bodies around you and study the sample for their pH, clarity and presence of any living organisms.
- A4. Study the presence of standard particulates matter in air at the two widely different sites.
- A5. Study of plant population density by quadrat method.
- A6. Study of plant population frequency by quadrat method.
- A7. To prepare a temporary mount of onion root tip of study mitosis.
- A8 (a). To study the action of salivary amylase on starch.  
(b) To study the effect of different temperature on the action of salivary amylase on starch.  
(c) To study the effect of three different pH on the activity of salivary amylase on starch.

### **Section-B**

- B1. Study of flower adapted to pollination by different agencies (Wind, insect)
- B2. Study of pollen germination on stigma through permanent slides.
- B3. Study to identify stage of gamete development i.e. T.S. testis and T.S. ovary through permanent slides.
- B4. To study meiosis in onion bud cell or grasshopper testis through permanent slides.
- B5. Study of T.S. of blastula through permanent slides.
- B6. Study of Mendelian inheritance using seeds of different color/sizes of any plant.
- B7. To study prepared pedigree charts of any one of the genetic traits such as rolling of tongue, blood group, ear lobes, widow's peak and colour blindness.
- B8. Exercise on controlled pollination, emasculation, tagging and bagging
- B9. To identify common disease causing organisms like Ascaris, Entamoeba, Plasmodium, Ringworm through permanent slides or specimens. Comment on symptoms of diseases that they cause.
- B10. To study plants and animals found in Xeric condition comment upon that they cause.
- B11. To study plants and animals found in aquatic condition. Comment upon their morphological adaptation.