Details of Physics, Chemistry and Biology Practical of Class XII of 2022-23

1. Experiments will be done according to the given specific dates and Time
2. Students have to select any one batch each from day 1 and day 2.
3. The data sheet of each of the experiment will be given to the students
4. The questions of the Viva exam will be given to the students
5. All the practical classes will be organized under the guidance of Mr. Subhadip Ray.
6. The student has to keep the discipline in the lab and not to do any damage of the instruments of the lab. If any student makes any damage of any instrument of the lab, he/she will be penalized for that.

Batch Timings (Starting from 7th NOV 2022)

DAY 1		DAY 2
MONDAY BATCH 1 10.30AM-12PM: PHYSICS 12PM-1.30PM: CHEMISTRY 2PM-3.30PM: BIOLOGY **OR** **MONDAY BATCH 2** **[SUITABLE FOR THE STUDENTS WITH BIOLOGY]** 10.30AM-12PM: CHEMISTRY 12PM-1.30PM: BIOLOGY 2PM-3.30PM: PHYSICS **OR** **TUESDAY BATCH 1** 10.30AM-12PM: BIOLOGY 12PM-1.30PM: PHYSICS 2PM-3.30PM: CHEMISTRY **OR** **TUESDAY BATCH 2** **[SUITABLE FOR THE STUDENTS WITHOUT BIOLOGY]** 10.30AM-12PM: CHEMISTRY 12PM-1.30PM: BIOLOGY 2PM-3.30PM: PHYSICS		**THURSDAY BATCH 1** 10.30AM-12PM: PHYSICS 12PM-1.30PM: CHEMISTRY 2PM-3.30PM: BIOLOGY **OR** **THURSDAY BATCH 2** **[SUITABLE FOR THE STUDENTS WITH BIOLOGY]** 10.30AM-12PM: CHEMISTRY 12PM-1.30PM: BIOLOGY 2PM-3.30PM: PHYSICS **OR** **FRIDAY BATCH 1** 10.30AM-12PM: BIOLOGY 12PM-1.30PM: PHYSICS 2PM-3.30PM: CHEMISTRY **OR** **FRIDAY BATCH 2** **[SUITABLE FOR THE STUDENTS WITH BIOLOGY]** 10.30AM-12PM: CHEMISTRY 12PM-1.30PM: BIOLOGY 2PM-3.30PM: PHYSICS

Course Fees Details of Physics Practical of Class XII of 2022-23

One time Registration Fees: Rs. 100 [**Only for New Students**]

SUBJECTS	FOR DREAMZ STUDENTS [Onetime Payment]	FOR OUTER STUDENTS [Onetime Payment]
1 Subject [Phy/ Chem/ Bio]	4000	4500
2 Subjects	7500	8500
3 Subjects	10500	12000

Syllabus of Physics Practical of class XII

Exp 1. To establish current-voltage relationship (Ohm's law) for a metallic conductor and find its resistance of the wire per unit length.
Exp 2. To find the specific resistance of a given wire by using meter bridge
Exp 3. Verify the combination of resistance in series by using meter bridge
Exp 4. Verify the combination of resistance in parallel by using meter bridge

Exp 5. To find the resistance of a galvanometer and its figure of merit by the half deflection method
Exp 6. To convert a galvanometer of known resistance and known figure of merit in to a voltmeter
Exp 7. To convert a galvanometer of known resistance and known figure of merit in to a Ammeter
Exp 8. To find the values of 'v' for different values of 'u' for a concave mirror and hence to find its focal length
Exp 9. To find the values of 'v' for different values of 'u' for a Convex Lens and hence to find its focal length by plotting the graph between 'u' and 'v'
Exp 10. To find the refractive index of a glass slab by using travelling microscope
Exp 11. To find the refractive index of a liquid by using convex lens and plane mirror
Exp 12. To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and the angle of deviation.
Exp 13. To draw the V-I characteristic graph of the p-n junction diode in forward and reverse bias and hence to find the resistance in forward and reverse bias

Syllabus of Chemistry Practical of class XII

Exp 1: To Determine the Concentration and Strength of KMnO4 Solution Using (M/20) Standard Mohr's Salt Solution.
Exp 2: To confirm the basic (cation) radicals in a given sample
Exp 3: To confirm the acidic (anion) radicals in a given sample.
Exp 4: To separate the basic (cation) and acidic (anion) radicals [Group Separation] for a given sample
Exp 5: To perform the salt analysis of NH_4Cl
Exp 6: To perform the salt analysis of $Pb(NO_3)_2$
Exp 7: To perform the salt analysis of $FeSO_4$
Exp 8: To perform the salt analysis of $ZnSO_4$
Exp 9: To perform the salt analysis of $(CH_3COO)_2Ca$
Exp 10: To perform the salt analysis of $Ba(Cl)_2$
Exp 11: To perform the salt analysis of $Sr(NO_3)_2$
Exp 12a: Identification of organic compound present in given organic compound
Exp 12b: Identification of unsaturation in a given sample of organic compound.
Exp 12c: Identification of alcoholic group in a given sample of organic compound.
Exp 12d: Identification of kitone and aldehyde groups in an given sample of organic compound.
Exp 12e: Identification of phenol in an given sample of organic compound.
Exp 12f: Identification of amine group in an given sample of organic compound.
Exp 12g: Identification of carboxylic acid group in an given sample of organic compound.

Syllabus of Biology Practical of class XII

Exp 1. To study the pollen germination on a slide
Exp 2. To study the moisture content of different soils
Exp 2. To study pH of different types of soil
Exp 4. To study the water holding capacity of garden soil and roadside soil
Exp 5. Collect water from two different water bodies around you and study them for pH
Exp 6. To study different water samples for the presence of living organisms
Exp 7. To study population density and percentage frequency of different plant species of a given area
Exp 8. To prepare temporary acetocarmine stained mount of onion root tip to study various stages of mitosis
Exp 9. To study the action of salivary amylase on starch
Exp 10. To study the effect of different temperatures on the activity of salivary amylase on starch
Exp 11. To study the effect of different pH on the activity of salivary amylase on starch
Exp 12. To isolate DNA from available plant material such as spinach leaves, green pea seeds, papaya etc.

Exp 13. To study the flowers adapted to pollination by different agencies • (wind, insect and birds)
Exp 14. To study the pollen germination and growth of pollen tube in a pollinated pistil (in Portulaca/grass or any other suitable flower)
Exp 15. To study and identify the stages of gamete development in mouse (mammal) i.e., T.S. of testis and L.S. of ovary through permanent slide
Exp 16. To study meiosis in grasshopper testis through permanent slide
Exp 17. To study T.S. of blastula through permanent slide
Exp 18. To study Mendelian inheritance using seeds of different colour/size of any plant
Exp 19. To study the prepared pedigree charts of genetic traits such as rolling of tongue, blood groups, widow's peak, colour blindness etc. .
Exp 20. To comment on the exercises of hybridization (emasculation, tagging and bagging) through models/charts
Exp 21. Study of Common Disease -Causing Organisms
Exp 22. Study of two plants and two animals found in xerophytic conditions and comment upon their adaptations/morphological features
Exp 23. Study of two plants and two animals found in aquatic conditions and comment upon their adaptations/morphological features

- **Seats are limited in the Batch.**
- **No students will be admitted if the maximum number of seats is allotted in any batch**
- **No students will be allowed to attend the practical without taking the Admission in Lab Course**