

**Subject wise**

# **LIST OF PRACTICALS**

**(Semester I)**

## **PHARMACEUTICAL ANALYSIS - I**

1. To draw a labeled diagram of apparatus used in qualitative analysis.
2. To prepare 500 ml of 0.1 N NaOH solution and to standardize it.
3. To prepare 250 ml of 0.1 N HCL solution and to standardize it.
4. To prepare 250 ml of 0.1 N H<sub>2</sub>SO<sub>4</sub> solution and to standardize it.
5. To determine the percentage purity of the given sample of Na<sub>2</sub>CO<sub>3</sub>.
6. To determine the composition of the given mixture of Na<sub>2</sub>CO<sub>3</sub> and NaHCO<sub>3</sub>.
7. To carry out the assay of Boric acid.
8. To carry out the assay of NaCl by Mohar 's method.
9. To prepare 0.1 N Sodium Thiosulfate solution and standardize it against K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>.
10. To determine the percentage purity of given sample of copper sulphate.

# COMPUTER APPLICATIONS

1. File and directory.
2. Windows fundamentals.
3. Parts of a window screen.
4. Internal commands.
5. External commands.
6. Disc operating system (DOS).
7. Difference between DOS and window.
8. MS Word.
9. Mail merge.
10. Microsoft Excel.
11. Features of operating system.
12. Advantages and disadvantages of DOS and windows.
13. Write a program to find 10 natural numbers.
14. Write a program to print table of 5.
15. Write a program to calculate the simple interest.
16. Write a program to calculate percentage and division of a student.
17. Write a program to calculate temperature from Fahrenheit.
18. Write a program to print 100 numbers even and odd.
19. Write a program to print the given year.
20. Write a program to interchange value of 2 variables.
21. Write a program to print the sum of 2 digits of a number.
22. Write a program to read an array as string.

# PHARMACEUTICAL CHEMISTRY - I

1. To carry out the identification test for:
  - a. Boric Acid
  - b.  $\text{ZnSO}_4$
  - c.  $\text{KMnO}_4$
  - d. Calcium Chloride
  - e.  $\text{CuSO}_4$
  - f.  $\text{Na}_2\text{CO}_3$
  - g.  $\text{NaHCO}_3$
  - h.  $\text{PbSO}_4$
  - i. Lead Acetate
  - j.  $\text{BaCl}_2$ .
2. To analyse the given compound for the presence of acid radical.
3. To analyse the given compound for the presence of basic radical.
4. To analyse the given compound for the presence of acid and basic radical.
5. To carry out the limit test for chlorides in the given sample of NaCl.
6. To carry out the limit test for the presence of sulphate in the given sample.
7. To carry out the limit test for the presence of iron in the given sample.

## PHARMACOGNOSY- I

1. To draw well-labeled diagram of compound microscope and study its various parts.
2. To study about micrometers and camera lucida.
3. To study different types of stomata.
4. To study different parts of leaf for classification of crude drug.
5. To carry out identification test for a given sample of Acacia powder.
6. To carry out identification test for a given sample of Tragacanth.
7. To carry out identification test for a given sample of Agar.
8. To carry out identification test for a given sample of Gaur gum.
9. To carry out identification test for a given sample of Pectin.
10. To carry out identification test for a given sample of Honey.
11. To study pharmacognostic characters of various Starch.
12. To carry out identification test of Castor oil and Shark liver oil.
13. To study pharmacognostic characters of Bees wax, Wool fat, Cocoa Butter.
14. To study pharmacognostic characters of Isabagol.
15. To measure width of phloem fibers in powdered crude drug
16. To measure diameter of starch grains in powdered crude drug
17. To determine leaf constants i.e palisade ratio, vein islet no. and vein termination no. of given leaf.
18. To determine stomatal no. and stomatal index of given sample of leaf.
19. Preparation of Herbarium sheets.
20. To study the various types of Trichomes and to determine there size.

## **REMEDIAL BIOLOGY**

1. To study morphology of given Flower.
2. To study modifications of Stem and Root
3. To study morphology and classification of Fruits and seeds
4. To study Phyllotaxy and Venation in different Leaves
5. To study Inflorescence.
6. To study different parts of Microscope, Care and There Use.
7. To study permanent slides of Plant Tissues.
8. To study permanent slides of Mitosis and Meiosis.
9. To study permanent slides of Amoeba, Entamoeba and Oxyuris.
10. To study general structure and life history of Schistosoma.
11. To study general structure and life history of Taenia.
12. To study general structure and life history of Ancylostoma.
13. To study general structure and life history of Trypanosoma.
14. To study general structure and life history of Housefly.
15. To study general structure and life history of Mosquitoes.
16. To study general structure and life history of Silkworm.
17. Microscopic examination of Dicot and Monocot stem from permanent slides.
18. Microscopic examination of Dicot and Monocot root from permanent slides.
19. Microscopic examination of Dicot and Monocot leaf from permanent slides.
20. To prepare T.S. of Dicot and Monocot stem.
21. To prepare T.S. of Dicot and Monocot root.
22. To prepare T.S. of Dicot and Monocot leaf.

**Subject wise**

# **LIST OF PRACTICALS**

**(Semester II)**

**Pharmaceutical Chemistry-II**

**(Physical Chemistry)**

1. To study the principle and working of Abbe's Refractometer and Polarimeter.
2. To determine the surface tension of given liquid sample by drop count method.
3. To determine the effect of various concentrations of surfactants on surface tension.
4. To measure the refractive index of the given sample using Abbe's Refractometer.
5. To determine the viscosity of given sample by Ostwald viscometer.
6. To determine the molar mass of Naphthalene by Rast's method.
7. To determine the water equivalent or heat capacity of calorimeter/ energy meter.
8. To determine the heat of neutralization of strong acid and strong base.
9. To determine the heat of solution of potassium nitrate.
10. To determine the cell constant of the given given electrode.
11. To determine the strength of given HCl solution by performing conductometric titrations of strong acid and weak base.
12. To determine the strength of given HCl solution by performing conductometric titrations of strong acid and strong base.
13. To determine heat of hydration of given sample of copper sulfate.
14. To determine the concentration of dextrose sample using polarimeter.

15. To perform conductometric titration of weak acid and strong base.

## **Pharmaceutical Chemistry-III**

### **(Organic Chemistry-I)**

1. To carry out the synthesis of acetyl salicylic acid (Aspirin) starting from salicylic acid and report the percentage yield.
2. To carry out preparation of p-nitro acetanilide starting from acetanilide and report its percentage yield.
3. To perform recrystallisation of the prepared sample and determine its melting point.
4. To study the conformation of different molecules: Ethane, Propane, Butane, Pentane, Cyclobutane, cyclopropane and cyclohexane.
5. To study the geometrical isomers in 2- butane molecule with ball and stick method.
6. To study various conformations of ethane molecule by using Newmann Projection Method
7. To study various conformations of n- butane molecule by using ball and stick method.
8. To study geometric isomers of butane-dioic acid in forms of *cis* i.e. Maleic acid and *trans* i.e. Fumaric acid by forming models with ball and sticks
9. To prepare stereomodels of molecules of methane, butane, chlorobenzene by ball stick method.
10. To carry out the synthesis of anthracene from anthraquinone and to report the percentage yield.
11. To carry out the identification of Nitrogen, Sulphur and halogens in the given organic sample I.
12. To carry out the identification of Nitrogen, Sulphur and halogens in the given organic sample II.

13. To identify the given Organic Compound I.
14. To identify the given Organic Compound II.
15. To identify the given Organic Compound III.

## **Anatomy, Physiology & Health Education (APHE)-I**

1. To study different types of animal tissues.
2. To determine the clotting time of your own blood sample.
3. To determine the bleeding time of your own blood sample.
4. To determine the RBC count of your own blood sample.
5. To determine the WBC count of your own blood sample.
6. To determine the haemoglobin content of your own blood sample.
7. To determine the blood group of your own blood sample.
8. To determine the differential leucocyte count of your own blood sample.
9. To determine the blood pressure of human body using sphygmomanometer.
10. To study the anatomy of human heart using a model and chart.
11. To study the human ECG
12. To study human skull bones
13. To study various bones of human body with help of a skeleton.

**Pharmaceutics – IV**  
**(Dispensing and Community Pharmacy)**

1. To prepare and dispense 30 ml chloroform water
2. To prepare and dispense 30 ml peppermint water
3. To prepare and dispense 30 ml camphor water
4. To prepare and dispense 30 ml rose water
5. To prepare and dispense 30 ml simple syrup
6. To prepare and dispense 30 ml invert syrup
7. To prepare and dispense 10 g compound tragacanth powder
8. To prepare and dispense 30 ml tragacanth mucilage
9. To prepare and dispense 30 ml potassium bromide mixture
10. To prepare and dispense 30 ml prepared chalk mixture
11. To prepare and dispense 30 ml chlorinated soda solution
12. To prepare and dispense 30 g phenol glycerin
13. To prepare and dispense 30 g boric acid glycerin
14. To prepare and dispense 30 g tannic acid glycerin
15. To prepare and dispense 30 ml castor oil emulsion
16. To prepare and dispense 30 ml liquid paraffin emulsion

17. To prepare and dispense 30 ml arachis oil emulsion
18. To prepare and dispense 30 ml turpentine oil emulsion
19. To prepare and dispense 30 ml weak iodine solution
20. To prepare and dispense 30 ml aqueous iodine solution
21. To prepare and dispense 30 ml compound sodium chloride mouthwash.
22. To prepare and dispense 30 ml tannic acid glycerin mouthwash.
23. To prepare and dispense 30 ml phenol glycerin gargles.
24. To prepare and dispense 30 ml castor oil Enema.
25. To prepare and dispense 30 ml Soap cresol solution
26. To prepare and dispense 30 ml potassium permanganate douche
27. To prepare and dispense 10 ml phenol glycerin ear drops
28. To prepare and dispense 30 ml boric acid glycerin nasal wash
29. To prepare and dispense 30 ml Milk of magnesia B.P.
30. To prepare and dispense 30 ml Calamine lotion I.P.
31. To prepare and dispense 30 ml White Lotion.
32. To prepare and dispense 30 ml Crystal violet and Brilliant green paint.
33. To prepare and dispense 30 ml compound iodine throat paint.
34. To prepare and dispense 30 ml tannic acid glycerin paint.
35. To prepare and dispense 30 ml menthol inhalation
36. To prepare and dispense 25 g simple ointment base
37. To prepare and dispense 10 g sulfur ointment B.P.
38. To prepare and dispense 10 g boric acid ointment.
39. To prepare and dispense 20 g emulsifying ointment base
40. To prepare and dispense 10 g compound benzoic acid ointment.

41. To prepare and dispense 10 g Non staining iodine ointment.
42. To prepare and dispense 10 g compound zinc oxide paste.
43. To prepare and dispense 10 g Unna's paste
44. To prepare and dispense 10 g Compound Rhubarb powder
45. To prepare and dispense 10 g Seidlitz powder
46. To prepare and dispense 10 g Effervescent granules