

FIRST B.PHARM DEGREE EXAMINATION (THEORY)

**Model Question Paper**

Pharmaceutical Chemistry, Paper - I  
(Inorganic & Physical Chemistry)

**Time: 3 Hrs**

**Max Marks: 100**

**Instructions:**

- Answer all questions.
- Draw diagrams wherever necessary

**Essay**

1. Write the Principle and procedure involved in the limit test for Iron & Arsenic with equation.
2. Derive the kinetic gas equation. What are the deviations of kinetic theory of gases?

**(2x10=20 marks)**

**Write short notes:**

3. Explain the term radio activity. Write the applications of radioactive isotopes in medicine
4. Write the method of preparation, test for purity and assay of chlorinated lime.
5. Describe in detail Langmuir's theory of adsorption.
6. What are real and ideal solutions? Explain.
7. Describe the method of preparation and assay of an inorganic compound used as an anticaries agent.
8. Write notes on antidotes.
9. How will you test for.
  - Microbial limit of milk of magnesia.
  - Acid neutralizing capacity of Aluminium Hydroxide gel.
10. Explain the applications of co-ordination compounds in Analysis
11. What are the different methods used for the measurement of radioactivity. Describe any one method in detail.
12. Astringents.

**(10x5=50 marks)**

**Answer Briefly:**

13. Define surface tension, refractive index and optical rotation.
14. Write short notes on combinations of antacids.
15. Explain Debye-Huckel theory.
16. Describe the method of preparation and assay of an inorganic compound used as an expectorant.
17. Explain the principle involved in the limit test for chlorides with equation.
18. Explain the following terms with examples.
  - Sedative
  - Respiratory stimulant
  - Sclerosing agent.
19. Explain dipole moment with example. Give its applications.
20. Comment on the following.
  - Neutralised glycerol is added in the assay of boric acid.
  - Formaldehyde is added in the assay of Ammonium Chloride.
21. How will you carry out the test for purity of the following?
  - Calcium Gluconate
  - Potassium citrate.
22. Essential and trace ions.

**(10x3=30 marks)**

FIRST B.PHARM DEGREE EXAMINATION (THEORY)

Model Question Paper

Pharmaceutical Chemistry Paper– II

Time: 3 Hrs

Max Marks: 100

**Instructions:**

- Answer all questions.
- Draw diagrams wherever necessary

**Write an essay on each of the following:**

1. Discuss in detail the theory of reactivity and orientation of electrophilic aromatic substitution reaction in benzene.
2. Alkyl halides are very good substrates for nucleophilic substitution reaction. Substantiate this statement giving suitable examples. **(2x10=20 marks)**

**Answer briefly on:**

3. Ozonolysis is an important tool in the structural elucidation of unsaturated hydrocarbons. Justify.
4. Give any two industrial methods of preparation of alcohols.
5. Ammonia derivatives of carbonyl compounds are very difficult to prepare. Why?
6. Explain the synthetic potential of Diazonium salts.
7. Starting from Benzene outline the synthesis of chlorobenzene.
8. Comment on the acidity of terminal alkynes.
9. How will you differentiate primary, secondary and tertiary alcohols?
10. Explain Hinsberg test.
11. Comment on the stability of carboxylate ion.
12. What is hyperconjugation? Explain. **(10x5=50 marks)**

**Write Short Notes on:**

13. Dehydration of tertiary alcohol is easier than primary. Why?
14. With a suitable example explain Fries rearrangement.
15. Aldehydes undergo oxidation easily, but ketones do not. Why?
16. Give an example of a 1,2- elimination reaction.
17. State Saytzeff's rule.
18. Why aryl halides are unreactive?
19. Using wurtz reaction we cannot prepare alkanes having odd number of carbon atoms. Why?
20. Why conjugated dienes are more stable than isolated dienes?
21. Explain Hofmann's degradation of amides.
22. What is Williamson's synthesis? **(10x3=30 marks)**

FIRST B.PHARM DEGREE EXAMINATION (THEORY)

Model Question Paper

Pharmaceutics

Time: 3 Hrs

Max Marks: 100

Instructions:

- Answer all questions.
- Draw diagrams wherever necessary

1. Classify dosage forms. Write in detail about solid dosage forms.
2. Discuss the Historical development of the Indian Pharmacopoeia.

(2x10=20 marks)

3. Distinguish between lotions and liniments.
4. What are the ideal requirements of a suppository base? Discuss in brief any one suppository base.
5. What are syrups? Explain the preparation of any two types of syrups with examples.
6. Explain the different methods for the preparation of aromatic waters with suitable examples.
7. How will you prepare 250 ml of 40% alcohol from given samples of 80% and 50% alcohols?
8. What is percolation? Explain the steps involved in percolation process.
9. How will you prepare and dispense the following:

$R_x$

Hyoscine Hydrobromide- 0.6 mg

*Fiatpulvis; mitte tales quinque*

10. State the method for dispensing "mixture containing indiffusible solids".
11. Write briefly on absorption ointment bases with suitable examples.
12. What is Physical incompatibility? Explain any two with examples and the methods to correct them.

(10x5=50 marks)

13. Give the Latin terms for the following:

- Every morning
- With twice as much
- To be rubbed in

14. Give the English meaning of the following:

- Semel die
- Tussi urgente
- Ad libitum

3. Give the Latin expansions and their English meaning of the following:

- m.ft.m.
- s.o.s.

15. State the types of jellies with suitable examples and their uses.
16. Give the necessary calculations to prepare 1 Litre of 5% Potassium permanganate solution with directions for diluting it to a 1 in 2000 solution.
17. Classify liniments with suitable examples.
18. Explain double maceration in brief.
19. What is an insufflation? What are its merits and demerits?
20. Discuss Herapathite reaction in brief and the method for its correction.
21. State the preparation of an emulsion by any one method.

(10x3=30 marks)

FIRST B.PHARM DEGREE EXAMINATION

**Model Question Paper**

HUMAN ANATOMY & PHYSIOLOGY

**Time: 3 Hrs**

**Max Marks: 100**

**Instructions:**

- Answer all questions.
- Draw diagrams wherever necessary

1. With the help of a neat labeled diagram outline the parts of respiratory system and illustrate the process involved in CO<sub>2</sub> transport in our body.
2. Classify the different types of blood cells and write the normal values of each. Give an account on the functions of each type of cells.

**(2x10=20 marks)**

3. Explain the sequences of events that occur in a cardiac cycle.
4. Enumerate the differences between sympathetic and parasympathetic nervous system.
5. Explain the different phases of menstrual cycle.
6. With the help of a neat labeled diagram enumerate the parts of digestive system.
7. Name the four coats of stomach.
8. Enumerate the bones of appendicular skeleton. Write two differences between male and female pelvis.
9. Discuss the physiology of muscle contraction.
10. What are vitamins? Classify with examples. Write two functions each of any two fat soluble vitamins.
11. What are the different types of body tissues? Discuss the special characteristics of epithelial tissues.
12. What is reflex action? Explain the structures involved in its production.

**(10x5=50 marks)**

13. Discuss the different functions of liver.
14. Mention any six disorders of eye.
15. Explain the structure of synovial joint.
16. Briefly explain mechanism of blood coagulation.
17. Where is Paneth cell seen? Mention its functions.
18. Define nerve plexus. Name the principal plexuses.
19. Mention the growth pattern of lymphoid tissues.
20. What are paranasal sinuses? Where are they located? Mention their functions.
21. What do you know about ventricles of brain?
22. Enumerate the first six cranial nerves.

**(10x3=30 marks)**

FIRST B.PHARM DEGREE EXAMINATION (THEORY)

**Model Question Paper**

Pharmacognosy

**Time: 3 Hrs**

**Max Marks: 100**

**Instructions:**

- Answer all questions.
- Draw diagrams wherever necessary

**Describe the following**

1. Describe the salient features of Apocyanaceae family. Name some medicinally important plants of this family.
2. Describe the factors influencing the cultivation of medicinal plants. Discuss about pest management and natural pest control agents.

**(2x10=20 marks)**

**Write short notes on:**

3. Tannins.
4. Plant hormones.
5. Clarification of crude drugs.
6. Pharmaceutical aids.
7. Umbelliferous fruits.
8. Marine source of drugs.
9. General methods for isolation of volatile oil.
10. Staining techniques.
11. Contemporary classification.
12. Preparation of medicinal castor oil.

**(10x5=50 marks)**

**Write the Biological Source constituents and uses of:**

13. Myrobalan
14. Tragacanth
15. Shark liver oil
16. Ginger
17. Lemon peel
18. Hydrocarpus oil
19. Agar
20. Isapgol
21. Clove
22. Beeswax

**(10x3=30 marks)**