

# QUESTION BANK



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**PUSHPAGIRI COLLEGE OF PHARMACY, TIRUVALLA  
FIRST YEAR PHARM D DEGREE**

**PHARMACEUTICAL INORGANIC CHEMISTRY  
QUESTION BANK**

**UNIT 1 ERRORS**

**Essays**

1. What are the different types of errors and explain the types of systematic errors and procedure for minimizing the systematic errors?
2. Define accuracy and precision. List and describe different types of errors in quantitative analysis. Discuss methods to reduce errors in quantitative analysis.

**Short Notes**

1. Distinguish between:
  - a. Determinate and indeterminate errors
  - b. Accuracy and precision
2. Classify different types of errors encountered in volumetric analysis.
3. Explain the different types of errors
4. Explain the following terms:
  - a. Error
  - b. Determinate error
  - c. Accuracy
  - d. Precision
  - e. Significant figures
5. Distinguish between:
  - a. Determinate and indeterminate errors
  - b. Accuracy and precision
6. Define and classify errors with examples



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7. Classify errors? What are the methods to minimize errors in analytical procedures?

## UNIT 2 VOLUMETRIC ANALYSIS

### Essays

1. Define the following terms: Titrant      Titrand      Titration.

With the help of titration curve suggest the best indicators for the titration involving strong acid vs strong base. Discuss the preparation and standardization of 0.1 M acetoous per chloric acid.

2. Define primary and secondary standards with examples. Explain the titration curve for strong acid versus strong base. Mention the ideal characters for a primary standard.

### Short Notes

1. What are secondary standards. Discuss their characteristics.
2. What are the criteria for the selection of indicators and write a note on preparation of standard solutions?
3. What is standard solution, primary standard and secondary standard and explain the requirements for the substances used as primary standard.
4. What are primary standards. Discuss their characteristics.
5. Explain the following terms in analysis
  - a. Blank titration
  - b. Back titration
6. How do you prepare the following solutions:
  - a. 0.1M potassium permanganate (MW= 158)
  - b. 0.1N oxalic acid (MW= 90)
7. How do you prepare 50.0 ml of 0.25M NaOH (Molecular weight=40)
8. Note on solubility product

## UNIT 3 ACID-BASE TITRATIONS



## **Essays**

1. Classify volumetric methods and briefly explain each method. Explain Bronsted-Lowry and Lewis concept of acids and bases.
2. What are neutralization titration and explain the theories of acid base concept
3. Explain three important buffer systems and its role in physiological acid base balance. Add a note on the preparation and assay of potassium acetate.

## **Short Notes**

1. Explain the theory of acid base titration with examples.
2. What are acid base titrations? Explain with one example mentioning the primary standard, titrant and indicator used.
3. Theory of indicators in acid-base titrations
4. Explain the theory of neutralization indicator.

## **UNIT 4 REDOX TITRATIONS**

## **Essays**

1. What are red-ox indicators. How will you prepare and standardize 0.1 M potassium permanganate solution? Discuss on the stability of complexes in complexometry titration.
2. Describe the theory of redox titration and explain the preparation and standardization of 0.1M potassium dichromate solution.
3. Discuss the different types of redox titrations with examples

## **Short Notes**

1. Define redox potential and mention Nernst equation. Explain characteristics of redox indicators with suitable example.
2. What are the salient features of a redox titration curve?
3. What are redox titrations? Explain with example



4. Note on any four indicators used in redox titrations
5. Give the principle behind the assay of ferrous sulphate by permanganometry.



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## **UNIT 5 NON-AQUEOUS TITRATIONS**

### **Essays**

1. Explain the principle behind non-aqueous titrations. Mention the different types of solvents and the indicators used. Add a note on “solvent leveling effect”.
2. Explain the types of solvents used in non-aqueous titration. Explain the preparation and standardization of 0.1N perchloric acid.
3. What is non-aqueous titration. Discuss the types of solvents for non-aqueous medium and explain the types of non-aqueous titration.
4. Explain the principle behind non-aqueous titrations, taking the example of titration of halogen salts of bases.
5. What is non-aqueous titration. Explain the basic principle involved in these titrations. Mention two examples each for titrants and indicators used.

### **Short Notes**

1. Classify solvents used in non-aqueous titrations with suitable examples.
2. Explain the method of preparation and standardization of perchloric acid solution.

## **UNIT 6 PRECIPITATION TITRATIONS**

### **Essays**

1. What are precipitation titrations. Explain Mohr's method and modified Volhard's method.
2. Explain the different types of precipitation titrations.

### **Short Notes**

1. Explain modified volhard method with reactions.
2. Explain Fajan's method of precipitation titrations.
3. Differentiate Mohr's method from Volhard's method.
4. Explain the precipitation titrations with an example



5. Describe Mohr's method of standardization of silver nitrate solution

## **UNIT 7 COMPLEXOMETRIC TITRATIONS**

### **Essays**

1. Discuss the following types of complexometric titrations, with suitable examples
  - a. Direct titration
  - b. Back titration
  - c. Replacement titration
  - d. Titrations involving masking and de-masking agents
2. What are the PM indicators used in complexometric titrations? How is the endpoint detected using PM indicators? What are the physical methods of end point determination in complexometric titrations?
3. Discuss the theory behind complexometric titrations. Mention the details of the titrants and indicators used in complexometric titrations.

### **Short Notes**

1. Explain different types of complexometric titrations.
2. What are masking and demasking agents in complexometric titration and give some examples.
3. How will you prepare and standardize 0.5M disodium EDTA solution?
4. With an example explain complexometric titrations.
5. What are complexes? Describe the importance of pH Control in complexometric titrations
6. Note on any two indicators used in complexometric titrations and their color change.

## **UNIT 8 THEORY OF INDICATORS**

### **Essays**



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1. Define indicators. Discuss the Ostwald theory and quinoid theory of indicator in detail.

### **Short Notes**

1. Explain the theory of indicators.
2. Briefly explain the quinonoid theory of indicators.

## **UNIT 9 GRAVIMETRY**

### **Essays**

1. Explain on various steps involved in gravimetric analysis.

### **Short Notes**

1. Explain with suitable example the co-precipitation and post-precipitation.
2. Briefly explain the various steps involved in gravimetric method of analysis.
3. Discuss the conditions required for getting a crystalline precipitate.
4. Describe the ignition and incineration step in gravimetric analysis.
5. What are the steps involved in the gravimetric analysis? Explain with an example

## **UNIT 10 LIMIT TESTS**

### **Essays**

1. Explain how the limit test for arsenic is performed.
2. Define limit test. Discuss the principle involved in the limit test for arsenic with suitable diagrams and reactions. Justify the addition of each reagent
3. Explain the principle, reaction and procedure involved in the limit test of iron and sulphates.
4. Discuss the principle and procedure involved in the limit test for iron, explaining the role of each reagent used.
5. Explain the principle and general procedure involved in the limit test for chlorides and sulphates. Why and what modification is required for substances which are



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precipitating in acidic media.

6. Explain the principle behind the limit tests for sulphates and the limit test for iron.
7. How do you carry out the limit test for chlorides and sulphates for the sample of sodium salicylate? Explain with principle and procedure.

### Short Notes

1. Discuss the principle involved in the limit test for sulphate and chloride
2. Explain the principle involved in the limit test for iron, with reactions.
3. Describe the principle and procedure involved in the limit test of arsenic with a neat diagram.
4. Explain the principle involved in the limit test for heavy metals.
5. Why iron is an impurity in pharmaceuticals. Discuss the principle and procedure involved in the limit test for iron
6. What is the role of?
  - a. dilute nitric acid in chloride limit test
  - b. granular zinc in arsenic limit test
7. What is the modification required for potassium permanganate sample to carryout sulphate limit test?
8. Why do you use citric acid and ammonia in iron limit test?

## UNIT 11 MEDICINAL GASES

### Essays

1. Explain on the principle, procedure and apparatus used in the assay of oxygen
2. Explain on the principle, procedure and apparatus used in the assay of carbon dioxide

### Short Notes

1. Discuss in detail the test for purity of oxygen IP.
2. Explain the preparation, properties, storage and uses of nitrous oxide.
3. The test for purity, storage and uses of nitrous oxide.



4. Method of preparation and uses of oxygen and carbon dioxide.
5. Discuss in detail the assay of oxygen.
6. How are the following tests performed in the medicinal gas 'oxygen'
  - a. test for oxidising substances
  - b. test for halogens
  - c. test for acidity or alkalinity
7. Discuss the various tests that oxygen as a medical gas has to comply with.
8. Name any three medicinal inhalants with their uses. Explain how they are supplied and stored.
9. Mention the method of assay of oxygen and the storage conditions.
10. Give the storage condition for:
  - a. carbon dioxide
  - b. oxygen
  - c. nitrous oxide
11. Brief the properties of oxygen and nitrous oxide

## **UNIT 12 ACIDIFIERS**

### **Essays**

1. Define acidifiers. Classify them with examples. Give the principle, reactions and procedure involved in assay of ammonium chloride

### **Short Notes**

1. What are acidifiers. Explain the test for purity, identification test and medicinal uses of sodium phosphate and ammonium chloride
2. What are acidifiers and alkalisers? Explain its role as pharmaceutical aids.



3. What are gastric acidifiers. In which condition they are used?
4. How dilute hydrochloric acid is prepared? Mention its uses.
5. How do you prepare ammonium chloride? Mention the pharmaceutical uses
- 6.

## **UNIT 13 ANTACIDS**

### **Essays**

1. What are antacids. Classify antacids. Explain the preparation, assay, storage and uses of aluminium hydroxide gel.
2. Define and classify antacids with examples and mention the medicinal uses of sodium bicarbonate, magnesium trisilicate and magnesium hydroxide oral suspension.
3. Classify antacids with one example each class. Mention any four ideal characters of an antacid. Mention one method of preparation of sodium bicarbonate.
4. Classify gastrointestinal agents giving examples. Explain its mechanism of action of each class and medicinal uses.

### **Short Notes**

1. Discuss the ideal properties of Antacids
2. How acid neutralizing capacity of antacids is determined.
3. Discuss the preparation of Aluminium hydroxide gel. List the test for purity for  $\text{Al(OH)}_3$  gel as per IP
4. Explain the following terms and mention two examples for each:
  - a. Systemic and non-systemic antacids
  - b. Cathartics
5. What is the rationale behind the combination of both magnesium and aluminium salts in antacid formulations?
6. How the acid neutralizing capacity of antacids is determined?



7. Explain the principle involved in the assay of sodium bicarbonate
8. What are the ideal requirements of an antacid? How do you evaluate antacid property in-vitro?
9. How do you prepare sodium bicarbonate? What is the disadvantage of this drug as antacid?
10. How do you prepare aluminium hydroxide?
11. What is antacid combination therapy.

## **UNIT 14 CATHARTICS**

### **Essays**

1. Define cathartics. Classify them with examples. Give the method of preparation and assay of any one.

### **Short Notes**

1. Explain the following term and mention two examples of cathartics
2. Explain the mechanism by which saline cathartics work.
3. Mention the method of preparation and assay of magnesium sulphate
4. What are saline cathartics. Mention the mechanism of action and give examples
5. Mention the medicinal uses of : Magnesium Hydroxide & Magnesium sulphate

## **UNIT 15 ELECTROLYTE REPLENISHERS**

### **Essays**

1. What is electrolyte replacement therapy? Write conditions of this therapy and their management by electrolytes and fluids.



2. Explain the preparation and assay method for sodium lactate. Add a note on ORS and its components.
3. Mention the composition of Ringer's solution and its specific uses. Explain the method of preparation of sodium acetate and mention the physiological role of phosphate & calcium ions.
4. Explain the mechanism by which acid-base balance is maintained in our body. Discuss electrolyte combination therapy.

### **Short Notes**

1. Electrolyte combination therapy.
2. What are the official preparations of sodium chloride and mention its uses.
3. Explain electrolyte combination therapy
4. How physiological acid base balance is maintained.
5. Narrate the physiological role of potassium, magnesium and bicarbonate ions
6. Mention the medicinal uses of: Sodium acetate & Potassium chloride

## **UNIT 16 ESSENTIAL TRACE ELEMENTS**

### **Essays**

1. What is the biological importance of iron? Describe the preparation and assay procedure of ferrous sulphate. Name any two other iron containing compounds official in IP.

### **Short Notes**

1. Mention the important physiological roles of iron and copper.
2. Physiological role of selenium and Iron in human health.
3. Explain the physiological role of zinc and copper.
4. Explain the physiological role of zinc and selenium.
5. Explain the physiological role of iron
6. Mention the physiological roles of zinc and iodine.
7. List the iron compounds that are official in IP. Discuss the preparation of any one



of them.

8. Discuss the physiological role of zinc and manganese in human health.
9. What are essential trace elements. Give two examples.
10. How do you prepare dicalcium phosphate?
11. What is the physiological role of iron and iodine?

## **UNIT 17 ANTIMICROBIALS**

### **Essays**

1. Define germicides, sanitizers, bacteriostatic and disinfectants. Explain the mechanism of action of antimicrobial agents.
2. Explain the mode of action of inorganic antimicrobials agents. Mention the typical properties of silver compounds as antimicrobials.

### **Short Notes**

1. Explain the monograph of hydrogen peroxide
2. Explain the preparation, assay and uses of boric acid.
3. Define antimicrobial, disinfectant and antiseptics and add a note on chlorinated lime.
4. Explain any one method of preparation, assay and use of hydrogen peroxide.
5. Explain why boric acid cannot be directly titrated against alkali. Mention the medicinal uses of boric acid.
6. Discuss the preparation of chlorinated lime. Elaborate on test for halides in chlorinated lime.
7. How does potassium permanganate act as anti-infective agent?
8. Discuss one method of preparation of hydrogen peroxide. Mention how hydrogen peroxide is stabilized.
9. Define and classify antimicrobials with examples
10. Explain the principle involved in the assay of chlorinated lime



11. Explain the mechanism of action of inorganic antimicrobials giving examples
12. Mention the chemical reactions and explain the principle involved in the assay of boric acid
13. How do you prepare and assay boric acid.
14. Iodine as antimicrobial agent
15. Explain the preparation, storage and labeling requirement for hydrogen peroxide
16. An abstracted monograph on boric acid IP.
17. Discuss in detail preparation and assay of iodine tincture.
18. Discuss the medicinal uses of the following:
  - a. Chlorinated lime
  - b. Boric acid
  - c. Selenium sulphide

## **UNIT 18 PHARMACEUTICAL AIDS**

### **Essays**

1. Define antidotes and classify antidotes with one example each. Mention one method of preparation each for sodium nitrite and sodium thiosulphate.

### **Short Notes**

1. Outline the specific use of each of the following as a pharmaceutical aid:
  - a. Activated charcoal
  - b. Nitrogen gas
  - c. Dibasic calcium phosphate
  - d. Light kaolin
  - e. Talc
2. Name five substances used as pharmaceutical aid for the specific purpose as: a.



- a. Anti oxidants
  - b. Absorbents and adsorbents
3. Mention the specific use of each of the following as a pharmaceutical aid:
- a. Bentonite
  - b. Titanium dioxide
  - c. Magnesium stearate
  - d. Silica gel
  - e. Talc
4. Emulsifying and suspending agents and its importance in formulations
5. What is adsorption capacity test for heavy kaolin?
6. Mention the specific medicinal uses of each of the following: Zinc stearate & Sodium bisulphite

## **UNIT 19 DENTAL PRODUCTS**

### **Essays**

1. What are dentrifrices? Classify dentrifrices with examples. Explain on fluorides as anticaries agents.

### **Short Notes**

1. What are desensitizing agents? Explain the role of fluorides in the treatment of dental caries.
2. Explain the term dentifrices
3. Discuss the role of fluorides as anticaries agents and give the preparation and uses of sodium fluoride.
4. What are dentifrices. Mention the preparation and medicinal uses of strontium chloride and dibasic calcium phosphate.
5. Define dentifrices. Classify dental products with one example each class.
6. Explain the role of fluorides as anti anticaries agents
7. What are abrasives? How do you prepare and assay zinc chloride?



8. Medicinal use of each of the following:

- Calcium Carbonate
- Zinc chloride S
- Sodium fluoride

## **UNIT 20. MISCELLANEOUS COMPOUNDS**

### **Essays**

1. What are expectorants. Classify expectorants with suitable examples. Explain the preparation and assay of ammonium chloride.

### **Short Notes**

1. What is the chemical composition of bentonite. Mention its use and the test for purity.
2. The test for purity, storage and uses of sodium metabisulphite.
3. Define antidotes and classify antidotes with one example each. Mention one method of preparation each for sodium nitrite and sodium thiosulphate.
4. What are topical agents and classify with examples. Mention the method of preparation and its specific uses of any two topical agents.
5. Explain the method of preparation, assay and medicinal uses of potassium iodide
6. Medicinal uses of: Potassium bromide, Activated charcoal & Potassium iodide

## **UNIT 21. RADIO PHARMACEUTICALS**

### **Essays**

1. Differentiate isotopes and isobars. Discuss in detail on radiation hazards and safety measures in handling radioisotopes. Discuss on isotopes of iodine and their applications in medical science.
2. Define isotopes and radioactivity. Explain the working of GM-counter with neat and labelled diagram. Discuss in detail the applications of radioisotopes in the diagnosis and treatment of diseases.

### **Short Notes**

1. Explain the term radioactivity



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2. Explain the radiation hazards and the safety measures to be taken in handling radio pharmaceuticals"
3. Mention the important precautions for handling radiopharmaceutical products.
4. Explain three types of radio-pharmaceutical radiations"
5. Discuss any two important radioactive isotopes in medicine
6. Explain the radio-isotopes Iodine-131 and Gold-198
7. Five diagnostic and therapeutic uses of radio-nuclides.



## **MEDICINAL CHEMISTRY III-QUESTION BANK**

### **Unit I-ANTIBIOTICS**

#### **10 Marks**

1. Write down the stereochemistry , classification and chemical degradation of penicillins
2. Write down the SAR of penicillins. Write in detail on chemistry of beta lactam antibiotics
3. Write down the classification and chemistry of tetracyclines
4. Write down the mode of action, chemistry, classification and SAR of cephalosporins

#### **5 Marks**

1. Write down the chemistry of polyene antibiotics
2. Write a note on aminoglycoside antibiotics
3. Chemical degradation of penicillins
4. Write down the SAR of penicillins
5. Structure and uses of any four tetracyclines
6. Structure and uses of any four semi-synthetic penicillins

#### **2 Marks**

1. Monobactams
2. Structure of any two cephalosporins
3. Mechanism of aminoglycoside antibiotics
4. Lactamase inhibitors
5. Structure and uses of any two second generation cephalosporins

## **UNIT II-ANTIBIOTICS, PRODRUGS, ANTIMALARIALS**

### **10 Marks**

1. Write in detail on macrolide antibiotics
2. Basic concept and applications of prodrugs
3. Write in detail on classification and SAR of quinolines

### **5 Marks**

1. Write a chemistry of macrolide antibiotics
2. Structure , synthesis and uses of chloramphenicol
3. Advantages of prodrugs
4. Etiology of malaria
5. Biguanides
6. Synthesis and uses of Chloroquine
7. 8-amino quinolines
8. Miscellaneous agents
9. Synthesis of pamaquine

### **2 Marks**

1. Structure and uses of 4-amino quinolines
2. Any two applications of prodrugs
3. Structure of pyrimethamine

## **UNIT III-ANTI-TUBERCULAR AGENTS, UTI AGENTS, ANTIVIRAL AGENTS**

### **10 Marks**

1. Write down the SAR and Classification of Anti-tubercular agents
2. Write in detail on synthetic antitubercular agents. Enumerate the synthesis of INH
3. SAR and classification of quinolones
4. Define and classify antiviral agents. Write in detail on purine nucleoside analogues
5. Define and classify antiviral agents. Write in detail on Reverse Transcriptase Inhibitors.

### **5 Marks**

6. Steps in Viral life cycle.
7. Synthesis of nitrofurantoin
8. Anti tubercular antibiotics
9. Synthesis, Mechanism and uses of p-amino salicylic acid
10. Synthesis and uses of Acyclovir
11. HIV -Protease inhibitors
12. Synthesis of ciprofloxacin

### **2 Marks**

1. Structure of pyrimidine nucleosides
2. Adamantane amines
3. Structure of any two first generation quinolones
4. Structure of any two second generation quinolones

## **UNIT IV-ANTIFUNGAL AGENTS, ANTIprotozoal, ANTHELMINTICS, SULPHONAMIDES AND SULPHONES**

### **10 Marks**

1. Define and classify antifungal agents. Write in detail on synthetic antifungal agents
2. Write down the chemistry and classification of antifungal antibiotics. Enumerate the synthesis of Miconazole
3. Define and classify anti-protozoal agents. Enumerate the synthesis of metronidazole
4. Define and classify anthelmintics. Write in detail on piperazines and Benzimidazole derivatives.
5. Classification, chemistry and SAR of sulfonamides
6. Define sulphonamides and explain its mechanism of action. Write in detail on sulphonamids for local infections. Enumerate the synthesis of sulfacetamide.

### **5 Marks**

1. Antifungal antibiotics
2. Synthesis of miconazole
3. Structure, synthesis and uses of tolnaftate
4. Write a note on synthetic antifungal agents
5. Define and classify antifungal agents
6. Synthesis and uses of metronidazole
7. Write down the mechanism of action and synthesis of Metronidazole
8. Classify antiprotozoal agents with its structure
9. Benzimidazole anthelmintics. Enumerate the synthesis of mebendazole
10. Structure, synthesis and uses of Diethyl carbamazine citrate

11. Structure and uses of any 3 anthelmintic agents
12. Chemistry of sulphonamides
13. Structure, synthesis and uses of sulphamethoxazole
14. Folate reductase inhibitors
15. Synthesis of Trimethoprim
16. Write a note on Sulphones
17. Synthesis and uses of Dapsone
18. SAR of sulphonamides
19. Synthesis of sulphacetamide

## **2 Marks**

1. Structure and uses of any two synthetic antifungal agents
2. Structure and uses of any two anti-protozoal agents
3. Structure of any 2 anthelmintics
4. Structure and uses of any two sulphonamides for general infection
5. Structure and uses of any two sulphonamides for urinary tract infection
6. Structure of sulfasalazine and sulfadiazine

## **UNIT V-INTRODUCTION TO DRUG DESIGN, COMBINATORIAL CHEMISTRY**

### **10 Marks**

1. Write a note in QSAR and it's parameters
2. Concept and applications of combinatorial chemistry
3. Various approaches used in drug design
4. Physiochemical parameters used in quantitative structure
5. Pharmacophore modelling and docking techniques

### **5 Marks**

1. Write a note on molecular modelling
2. Solid phase synthesis
3. Hansch analysis
4. Docking Techniques
5. Solution phase synthesis
6. Hammett's Electronic parameter
7. Partition coefficient-QSAR parameter

### **2 Marks**

1. Define pharmacophore modelling
2. Any two applications of combinatorial chemistry
3. Taft's steric parameter
4. Define Linker and Anchor
5. Parallel synthesis

**PUSHPAGIRI COLLEGE OF PHARMACY, TIRUVALLA**

**FOURTH SEMESTER M. PHARM 2022 -2023**

**JOURNAL CLUB PRESENTATION**

<b>Sl. No</b>	<b>Name of Student</b>	<b>Branch</b>	<b>Date &amp; Time</b>	<b>Venue</b>	<b>Name of Evaluators</b>
1	Anitta Susan Mathew	Pharmacology	18.4.2023 9:30 – 1:30 pm	Third B Pharm Classroom, III Floor	Mrs.Preethu.P.John Mr. Jasper Stalin.S Mrs. Sumi James Mrs.Anjana George
2	Anna Shyla Mathew				
3	Devika Ramanan				
4	Geethu M. Nair				
5	Gifty Ann Alex				
6	Jain K Jose				
7	Manju B.K				
8	Jino P. Thomas	Pharmacology	19.4.2023 9:30 – 1:30 pm	Third B.Pharm Classroom, III Floor	Mrs.Preethu.P.John Mr. Jasper Stalin.S Mrs. Sumi James Ms. Neethi Shaju
9	Prabina Priyan				
10	Rani K Cherian				
11	Reyan Anna Cheriyan				
12	Sandra Varghese				
13	Sangeetha G.A				
14	Sona Elizabeth Zachariah				
15	Ashley Rajan	Pharmacy Practice	18.4.2023 9:30 – 11:30 am	M.Pharm Classroom, III Floor	Dr. Nithin Manohar Mrs. Rani Manju Mrs. Malini S Mrs. Archana Vijay
16	Ashmi Salam				
17	Jubi Omana Biju				
18	Joshny Varghese	Pharmaceutical Chemistry	18.4.2023 9:30 – 11:30 am	Seminar Room, II Floor	Dr. Presannakumaran P.N Dr. Christy. K. Jose Mrs. Anju V
19	Justin Jacob Thomas				
20	Rincy Meriyam Varghese				

*13/04/2023*  
M Pharm Project Co-ordinator



*13/04/2023*  
For *Jaanchu*  
Principal  
Pushpagiri College of Pharmacy  
Medicity Campus, Tiruvalla  
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**PUSHPAGIRI COLLEGE OF PHARMACY, TIRUVALLA**  
**FOURTH SEMESTER M. PHARM 2022 -2023**  
**JOURNAL CLUB PRESENTATION**

<b>M Pharm Pharmacy Practice</b>				
<b>Sl. No</b>	<b>Name</b>	<b>Date</b>	<b>Signature</b>	<b>Remarks</b>
1	Ashley Rajan	18.4.2023		
2	Ashmi Salam	18.4.2023		
3	Jubi Omana Biju	18.4.2023		

  
 ANJU V  
 Signature of In-charge

  
 M. SANTHOSH  
 Principal

1. Mrs. Archana Ujjai Archana  
18/4/2023
2. Mrs. Rani Manju Rani  
18/4/2023.
3. Mrs. Malini S Malini  
18/4/23



  
 Principal  
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PUSHPAGIRI COLLEGE OF PHARMACY, TIRUVALLA

FOURTH SEMESTER M. PHARM 2022 -2023

JOURNAL CLUB PRESENTATION

M Pharm Pharmaceutical Chemistry				
Sl. No	Name	Date	Signature	Remarks
1	Joshny Varghese	18.4.2023		
2	Justin Jacob Thomas	18.4.2023		
3	Rincy Meriyam Varghese	18.4.2023		

  
ANJU.V

Signature of In-charge

  
Principal

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PUSHPAGIRI COLLEGE OF PHARMACY, TIRUVALLA

FOURTH SEMESTER M. PHARM 2022-2023

JOURNAL CLUB PRESENTATION

M Pharm Pharmacology

Sl. No	Name	Date	Signature	Remarks
1	Anitta Susan Mathew	18.4.2023		
2	Anna Shyla Mathew	18.4.2023		
3	Devika Ramanan	18.4.2023		
4	Geethu M. Nair	18.4.2023		
5	Gifty Ann Alex	18.4.2023		
6	Jain K Jose	18.4.2023		
7	Manju B.K	18.4.2023		
8	Jino P.Thomas	19.4.2023		
9	Prabina Priyan	19.4.2023		
10	Rani K Cherian	19.4.2023		
11	Reyan Anna Cherian	19.4.2023		
12	Sandra Varghese	19.4.2023		
13	Sangeetha G.A	19.4.2023		
14	Sona Elizabeth Zachariah	19.4.2023		

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