QP Code: 625006 **Reg. No……**

Sixth Semester B. Pharm Degree Supplementary Examinations
March 2026
Pharmaceutical Biotechnology

(2017 Scheme)

Time: 3 Hours **Max. Marks: 75**

- ***Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space***
- ***Answer all parts of a single question together • Leave sufficient space between answers***
- ***Draw diagrams wherever necessary***

Essays **(2x10=20)**

1. Explain fermentative production and purification of penicillin
2. Define biosensors. Discuss the different types of biosensors in pharmaceutical industries

Short Notes **(7x5=35)**

3. Describe the steps involved in amplifying the fragment of DNA by Polymerase Chain Reaction
4. Explain the cells/proteins involved and the mechanisms of our second line of immune defence against antigens
5. Explain the production of Oral Polio Vaccines
6. Explain the aeration and agitation systems used in fermenters
7. Explain frame shift mutation with examples
8. Explain the process of ELISA
9. How does protein Engineering help in design of novel proteins

Answer Briefly **(10x2=20)**

10. Define transduction
11. Explain innate immunity
12. Applications of plasma substitutes
13. Monoclonal antibodies
14. Southern blotting
15. Restriction endonuclease
16. Vitamin B_{12} production
17. Fed batch fermentation
18. Difference between submerged and solid state fermentation
19. Lipase

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QP Code: 623006 **Reg. No……**

Sixth Semester B. Pharm Degree Supplementary Examinations
March 2026
Herbal Drug Technology
(2017 Scheme)

Time: 3 Hours **Max. Marks: 75**

- ***Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space***
- ***Answer all parts of a single question together • Leave sufficient space between answers***
- ***Draw diagrams wherever necessary***

Essays **(2x10=20)**

1. Explain about good agricultural practices in the cultivation of medicinal plants.
2. Define Asava and Arishta. Explain the method of preparation and standardization of asava and Arishta.

Short Notes **(7x5=35)**

3. Write a note on herbal raw material for skin care and oral hygiene products.
4. Explain the importance of Chicory and Fenugreek as health food.
5. Write a note on herbal tablet.
6. Explain the preparation of Bhasma.
7. Write a note on plant-based industries involved in work on medicinal and aromatic plants in India.
8. Explain regulation of ASU drugs in India.
9. Explain the role of neutraceuticals in cancer.

Answer Briefly **(10x2=20)**

10. Define Biopiracy.
11. Give the biological source and health benefits of garlic.
12. Write the Principle of the Siddha system of medicine.
13. Define Patent.
14. Give the various interactions of drug Hypericum.
15. Name two bleaching agents of herbal origin and write their source.
16. Name two natural colourants. Give its sources.
17. What are phytosomes.
18. Define Lehya.
19. Define nutraceuticals. Give examples.

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QP Code: 621006 **Reg. No……**

Sixth Semester B. Pharm Degree Supplementary Examinations
March 2026
Medicinal Chemistry III
(2017 Scheme)

Time: 3 Hours **Max. Marks: 75**

- ***Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space***
- ***Answer all parts of a single question together • Leave sufficient space between answers***
- ***Draw diagrams wherever necessary***

Essays **(2x10=20)**

1. Classify Antimalarial drugs with their structure and add on etiology of malaria.
2. Classify Sulfonamides with their chemical structure and add a note on SAR of Sulfonamides.

Short Notes **(7x5=35)**

3. Enlist the applications of Combinatorial Chemistry.
4. Classify Antifungal drugs and write the mechanism of action of Nystatin.
5. Write the synthesis and uses of Dapsone.
6. Explain the SAR of quinolones.
7. Write the chemical degradation of Penicillin.
8. Write a note on Macrolide antibiotics.
9. Explain any two QSAR parameters.

Answer Briefly **(10x2=20)**

10. Explain the pharmacophore modeling.
11. Structure and uses of nitrofurantoin.
12. Enlist antitubercular antibiotics.
13. Give the structure and uses of Acyclovir.
14. Write the uses of Metronidazole and Ivermectin.
15. Name any two tetracyclines with uses.
16. Any two applications of prodrug design with examples.
17. Outline the synthesis of Chloroquine.
18. Outline the synthesis of para amino salicylic acid.
19. Name any one Folate reductase inhibitors with uses.

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QP Code: 626006 **Reg. No……**

Sixth Semester B. Pharm Degree Supplementary Examinations
March 2026
Pharmaceutical Quality Assurance

(2017 Scheme)

Time: 3 Hours **Max. Marks: 75**

- ***Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space***
- ***Answer all parts of a single question together • Leave sufficient space between answers***
- ***Draw diagrams wherever necessary***

Essays **(2x10=20)**

1. Discuss in detail, the concept of Quality by Design (QbD) and its importance.
2. Explain purchase specifications and maintenance of stores for raw material.

Short Notes **(7x5=35)**

3. Mention the steps for registration under ISO 14000.
4. Write a note on personnel responsibilities.
5. Describe the quality control tests for rubber closures.
6. Explain the concept and process of quality audit.
7. Materials management in warehouse
8. How sterile area is maintained in pharmaceutical industries.
9. Describe the concept of quality management, in general.

Answer Briefly **(10x2=20)**

10. Write any two philosophies of TQM.
11. Compare Quality Assurance (QA) versus Quality Control (QC).
12. Explain calibration of pH meter.
13. SOP on complaint handling.
14. Compare GMP versus GLP.
15. What QC tests for secondary packing materials.
16. Enlist the documents maintained in the pharmaceutical industry.
17. What do you mean by quality review.
18. Write a note on QSEM.
19. Differentiate between calibration and validation.

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QP Code: 622006 **Reg. No……**

Sixth Semester B. Pharm Degree Supplementary Examinations
March 2026
Pharmacology III

(2017 Scheme)

Time: 3 Hours **Max. Marks: 75**

- ***Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space***
- ***Answer all parts of a single question together • Leave sufficient space between answers***
- ***Draw diagrams wherever necessary***

Essays **(2x10=20)**

1. Explain the general principles of chemotherapy and add a note on microbial resistance.
2. Classify anti-tubercular agents. Explain the pharmacology of first line anti-tubercular drugs.

Short Notes **(7x5=35)**

3. Explain the pharmacology of proton pump inhibitors.
4. Explain the drugs used in management of COPD.
5. Classify cephalosporins. Explain the mechanism of action of cephalosporins.
6. Classify anticancer drugs. Explain the mechanism of action of vinca alkaloids.
7. Classify beta lactam antibiotics. Explain the pharmacology of carbapenem.
8. Explain the concept of gene therapy along with its applications.
9. Explain the pharmacology of drugs used for urinary tract infections.

Answer Briefly **(10x2=20)**

10. Write a short note on monoclonal antibodies.
11. Classify penicillins. Write the adverse effects of penicillin G.
12. Write the drugs used in psoriasis.
13. List out the systemic anti-amoebic drugs.
14. Write the adverse effects of chloramphenicol.
15. Write the mechanism of action of antidiarrheal drugs.
16. Write the uses of expectorants and antitussives.
17. Write the drugs used in the treatment of sexually transmitted diseases.
18. Classify antimalarial drugs.
19. Outline the importance of stem cell therapy.

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