BP 601 T

(Total No. of Questions : 14] [Total No.of Pages : 01)

III/IV B. PHARMACY DEGREE EXAMINATIONS, JUNE / JULY -2022

Sixth Semester

MEDICINAL CHEMISTRY III - THEORY

Time : **Three Hours** Maximum : **75** Marks

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SECTION - A

Answer any FIVE Questions. 5x10 = 50 M

1. Write the structures of various Tetracyclines. Discuss their chemical aspects, mechanism of action and medicinal uses.
2. Write a note on
   a) Applications of Prodrugs design.
   b) Chloramphenicol.
3. Discuss the SAR of Quinolones. Write the structures and medicinal uses of Norfloxacin, Sparfloxacin, Lomefloxacin and Ofloxacin.
4. Classify Sulphonamides. Discuss the SAR and MOA of Sulphonamides.
5. Discuss the concept and applications of combinatorial chemistry.
6. Classify cephalosporins with examples and their structures. Discuss their SAR and mode of action.
7. Write the synthesis and medicinal uses of
   a) Tolnaflate. b) Acyclovir.

SECTION - B

Answer any FIVE Questions. 5x5 = 25 M

8. Write the IUPAC name, Synthesis, MoA and uses of Metronidazole.
9. Classify Antimalarial drugs with examples.
10. Write a note on Hammet's electronic parameter and Taft's steric parameter.
11. Write a brief note on Macrolides.
12. Enumerate the chemical degradation of Penicillins.
13. Classify Antiviral agents with examples and their structures.
14. Give a brief account on Antifungal antibiotics.

BP 602 T

(Total No. of Questions : 14] [Total No.of Pages : 01)

III/IV B. PHARMACY DEGREE EXAMINATIONS, JUNE / JULY -2022

Sixth Semester

PHARMACOLOGY III - THEORY

Time : **Three Hours** Maximum : **75** Marks

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SECTION - A

Answer any FIVE Questions. 5x10 = 50 M

1. Define Cancer, classify anti-cancer drugs and explain the pharmacology of anti-metabolites.
2. Give a note on :
   a) Anti-malarial therapy.
   b) Anti-tubercular DOT's therapy.
3. Classify Sulfonamides with examples & explain MOA, ADR, Uses of Co-trimoxazole.
4. Write about biological clock & their significance leading to chronotherapy.
5. Define anti asthmatics, give their classification with examples and write the pharmacology of their prototype.
6. Classify anti secretary agents with examples and explain the pharmacology of PPI's.
7. Write detailed about
   a) Immuno Supressants b) Biosimilars.

SECTION - B

Answer any FIVE Questions. 5x5 = 25 M

8. Write short notes on Laxatives.
9. Explain the mechanism of bacterial protein synthesis inhibitors.
10. Give a detailed note on Prokinetic agents.
11. Write the pharmacology of cyclosporine.
12. Explain about the Azole derivatives used in fungal infections.
13. Explain about the toxicity studies.
14. Give a note on general principles of treatment of Poisoning.

BP 603 T

(Total No. of Questions : 14] [Total No.of Pages : 01)

III/IV B. PHARMACY DEGREE EXAMINATIONS, JUNE / JULY -2022

Sixth Semester

HERBAL DRUG TECHNOLOGY - THEORY

Time : **Three Hours** Maximum : **75** Marks

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SECTION - A

Answer any FIVE Questions. 5x10 = 50 M

1. a) Discuss the procedure for selection, identification and authentication of herbal materials ?
   b) Define herb & herbal medicine.
2. Describe the following :
   a) Organic farming & organic manures.
   b) Pest management in medicinal plants.
3. Outline the aspects like growth, market, scope & types of products available in the market related to Nutraceuticals ?
4. a) What are herb-food & herb-drug interactions and classify the interactions ?
   b) List out the possible side effects & interactions of Ephedra ?
5. Write the significance of herbal raw material in formulation of skin care products & add a note on various herbal materials used along with examples.
6. Discuss the patenting & regulatory requirements of natural products in detail.
7. a) Explain the objectives & components of GMP of Indian systems of Medicine ?
   b) Describe the Documentation Protocol in herbal drug industry.

SECTION - B

Answer any FIVE Questions. 5x5 = 25 M

8. Describe the procedure for preparation & standardization of Lehya & Bhasma.
9. Give a brief note on Biopesticides.
10. Discuss the health benefits & role of Nutraceuticals in Cancer.
11. Explain the benefits of Pengreek & Ashwagandha as herbal healthy food ?
12. Outline the herbal raw materials used as oral hygiene products ?
13. Discuss the procedure for assessment of herbal drugs according to ICH guidelines ?
14. Enlight about plant based institutions involved in work on medicinal & aromatic plants in India.

BP 604 T

(Total No. of Questions : 14] [Total No.of Pages : 01)

III/IV B. PHARMACY DEGREE EXAMINATIONS, JUNE / JULY -2022

Sixth Semester

BIOPHARMACEUTICS AND PHARMACOKINETICS - THEORY

Time : **Three Hours** Maximum : **75** Marks

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SECTION - A

Answer any FIVE Questions. 5x10 = 50 M

1. Discuss about mechanism of drug absorption through GIT and add a note on absorption drug through extravascular route of administration ?
2. a) Explain clinical significance of protein binding of drugs.
   b) Enumerate factors affecting renal extraction of drugs.
3. Describe in detail about drug metabolic pathways & enzymatic systems involved in drug metabolism ?
4. a) Define Bio availability & Bio Equivalence & wirte objectives of bioavailability ?
   b) Give a note on Invibo dissolution models.
5. Discuss the methods available for measurement of bioavailability ?
6. Estimate the K_E, $t_{1/2}$ & V_d for drug administered through IV Infusion in one compartment open model ?
7. Discuss in detail about kinetics of multiple dosing after IV bolus administration & calculation of loading & maintainance dose ?

SECTION - B

Answer any FIVE Questions. 5x5 = 25 M

8. Define non linear pharmacokinetics & mention reasons for non linearity.
9. Give a brief note on Two compartment open model for IV administration.
10. Enumerate factors affecting protein drug binding.
11. Enlight about Non renal routes of drug Excretion.
12. Define pharmacokinetics & classify models to study pharmacokinetics of drugs.
13. What are Cl_+ & CL_R & write their significance.
14. Define & distinguish absolute & relative bioavailability ? Write significance of bio equivalence studies ?

(BP .605 T)

IV/IV B.PHARMACY- VI SEMESTER REGULAR DEGREE EXAMINATION -------

PHARMACEUTICAL BIOTECHNOLOGY

Time: Three hours | maximum: 75 marks

SECTION-A

Answer Any FIVE Questions 5X10=50M

1. What is Biosensor? Elobarate the working principle of biosensor and explain it's Applications in pharmaceutical industries.

2. a) Significance of monoclonal antibodies in pharmaceutical industries

   b) Advantages of immobilized enzymes over isolated enzymes.

3. Discuss various PCR techniques and add a note on it's applications in the feild of biotechnology.

4. Explain indetails ~~cla~~ about classification of immunity and give a detailed note on principles of immune responses. in human body.

5. Define and classify vaccine. Describe the preparation and standardisation of any one bacterial vaccine.

6. Give an exhaustive notes on genetic organisation of Eukaryotes and prokaryotes.

7. a) optimization of fermenter

   b) Effluent treatment methods.

SECTION-B

Answer Any FIVE Questions 5x5=25M

8. Write a note on protein engineering.

9. Explain the basic principles of genetic engineering.

10. Explain the cells and organs involved in immune response.

11. Discuss the structure and functions of MHC.

12. Explain the differences in blood products and plasma substituents.

13. Explain microbial biotransformation and applications in pharmaceutical Biotechnology.

14. Write the components included in ~~fermentation~~. Add a note on procedure of ~~production~~ Citric acid production by fermentation ~~technology~~.

15. Explain about various types of vectors used in r-DNA technology.

16. How specific immunity does differ from non-specific ~~immunity~~ resistance? Discuss various types of immunoglobulins.

17. Write short notes ~~for~~ the following:
   a) factors affecting mutation
   b) Hypersensitivity reactions.

18. Explain the techniques of enzyme immobilisation.

BP 606 T

(Total No. of Questions : 14] [Total No.of Pages : 01)

III/IV B. PHARMACY DEGREE EXAMINATIONS, JUNE / JULY -2022

Sixth Semester

PHARMACEUTICAL QUALITY ASSURANCE - THEORY

Time : **Three Hours** Maximum : **75** Marks

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SECTION - A

Answer any FIVE Questions. 5x10 = 50 M

1. Discuss the purpose of ICH guidelines and add a brief outline on Q-series guidelines.
2. Write a detailed note on construction and plant layout aspects in pharmaceutical industry as per cGMP.
3. Discuss the quality control tests for different types of containers.
4. Write a note on quality audit and quality documentation in pharmaceutical industry.
5. Discuss the general principles of analytical method validation.
6. Define complaints and discuss the steps in handling of complaints.
7. Briefly outline the steps for registration to ISO 9000 and ISO 14000 and add a note on their benefits.

SECTION - B

Answer any FIVE Questions. 5x5 = 25 M

8. Write the elements and tools of QbD program.
9. Briefly explain maintainance of stores for raw materials as per GMP guidelines.
10. Write a short note on general provisions as per Good Laboratory Practices (GLP).
11. Write a brief outline on importance of SOP and distribution records.
12. Briefly explain the calibration procedure for pH meter.
13. Discuss the objectives of materials management in warehousing.
14. Define the following :
    a) Quality assurance.
    b) Total Quality Management.
    c) Quality Control.
    d) Calibration.