FACULTY OF PHARMACY
B. Pharmacy VI-Semester (PCI) (Main) Examination, December 2020
Subject: Quality Assurance

Time: 2 Hours **Max. Marks: 75**

PART – A

Note: Answer any Seven questions. **(7 x3=21 Marks)**

1. Define TQM
2. Give difference between Quality Assurance & Quality Control.
3. State the purpose of ICH.
4. Name Quality Control tests for glass containers.
5. Name different parameters of Analytical method validation.
6. Name any four responsibilities of Quality control people.
7. Mention classification of Recall.
8. What is qualification and validation .
9. Enlist the scope for validation.
10. Give the principles of NABL accreditation.

PART – B

Note: Answer One question. **(1 x14=14 Marks)**

11. a) Define Quality by Design.
    b) Write in detail note on QbD.
12. Write a short note on plant layout with example.
13. Explain Good Warehousing practices.

PART - C

Note: Answer any Five questions. **(5x8=40 Marks)**

14. Write in detail Equipment Validation.
15. Draw cause and effect diagram for tablet manufacturing process.
16. Write in detail parameters to be checked in Quality Audit.
17. Write short note on ISO 9000.
18. Explain in short Good Laboratory practices.
19. Explain steps involved in complain handling.
20. Explain the term "validation Master Plan".
21. What is forced degradation stability study? Explain in short.
22. Write a note on Quality Management System.

FACULTY OF PHARMACY

B.Pharmacy VI-Semester (PCI) (Main) Examination, November 2020

Subject : Pharmaceutical Biotechnology

Time: 2 Hours   **Max. Marks: 75**

PART – A

Note: Answer any Seven questions.   *(7 x3=21 Marks)*

1. Enlist applications of biotechnology to pharmaceutical industry.

2. Describe the terms biosensor and bioreactor.

3. Write significance of enzyme acting on DNA.
   i) Polymerase   ii) Ligase

4. Describe the importance linkers and adapters.

5. What is toxoid. Give examples

6. What are plasma substitutes?

7. Define the following :

   i) Immunoblotting   ii) Immuno suppression.

8. How will you transfer gene by transduction method?

9. Define fermentation.

10. Write six enzymes.

PART – B

Note: Answer One question.   *(1 x14=14 Marks)*

11. Explain benefits of recombinant DNA products. Write a detailed account on human insulin production by rDNA technology

12. What is Hybridoma technology? Explain the steps involved in the production of monoclonal antibodies and applications.

13. Describe Microbial biotransformation and its pharmaceutical applications.

PART - C

Note: Answer any Five questions.   *(5x8=40 Marks)*

14. Explain the concept of enzyme immobilization. Comment on its applicability with suitable examples.

15. Write short notes on production of amylase.

16. Write short notes on interferon production by rDNA technology.

17. Write a short note on PCR.

18. Differentiate between humoral mediated immunity and cell mediated immunity.

19. Give an account of collection, processing & storage of whole human blood.

20. What is solthern blotting? Give details of southern blotting and application.

21. Enlist various criteria to be considered in designing of a fermentor, Draw a neat schematic labelled diagram of fermentor.

22. Write short notes on antibiotic production by fermentation with suitable example.

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FACULTY OF PHARMACY

B.Pharmacy VI-Semester (PCI) (Main) Examination, November 2020

Subject : Medicinal Chemistry - III

Time: 2 Hours   **Max. Marks: 75**

PART – A

Note: Answer Seven Questions.   **(7 X 3 = 21 Marks)**

1. Write the general synthesis of sulfonamides.

2. What are folate reductase inhibitors?

3. Give the mechanism of action of Trimethoprim.

4. Mention any six quinolone drugs.

5. What are Monobactams?

6. Classify antitubercular agents with examples.

7. Mention any six sulfonamide drugs

8. Mention any six antifungal agents

9. Mention any six antiviral drugs.

10. Mention any six antiprotozoal agents?

PART – B

Note: Answer One Question.   **(1X14 = 14 Marks)**

11. a) Write a note on B-lactam antibiotics
    b) Write a note on tetracyclines.

12. a) Write the classification of antifungal agents
    b) Give the synthesis, mechanism of action and uses of any one antifungal drug.

13. a) Write a note on Tetracyclines.
    b) Write a note on Anti-protozoal agents.

PART – C

Note: Answer Five Question.   **(5X8 = 40 Marks)**

14. Discuss the SAR of semi-synthetic Penicillins.

15. What are prodrugs? Write the classification of Prodrugs based on functional groups.

16. Write the synthesis and mechanism of any two sulfa drugs.

17. Give a note on Artemisinin derivatives.

18. Write the synthesis, mode of action and therapeutic uses of Isoniazid and Para amino salicylic acid

19. Write a note on Anti-HIV drugs.

20. Write the synthesis and mechanism of Diethylcarbamazine citrate and Metronidazole.

21. Write about Quinoline antibiotics.

22. What are β – lactam antibiotics? Write their mechanism of action.

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FACULTY OF PHARMACY

B. Pharmacy VI-Semester (PCI) (Main) Examination, November 2020

Subject : Biopharmaceutics and Pharmacokinetics

Time: 2 Hours   **Max. Marks: 75**

PART – A

Note: Answer Seven Questions.   **(7 X 3 = 21 Marks)**

1) Mention the factors effecting elimination of drugs

2) List the factors influencing absorption of drugs through GIT

3) Differentiate tissue binding and protein binding.

4) Write the markers used in renal clearance.

5) Define Bioavailability.

6) Expand the terms $i. A \cup C$ ii. $t_{\frac{1}{2}}$,   iii. Vd   iv. IV   v. Ka   vi. E_E

7) What is $t_{\frac{1}{2}}$ what is its importance

8) Write the equation for calculating loading dose.

9) What is apparent volume of distribution and its importance
10) What are the factors for cause of non-linear kinetics.

PART – B

Note: Answer One Question.   **(1X14 = 14 Marks)**
11) Write about in - vitro drug dissolution models

12) Derive mathematical equations used to calculate Pharmaco-Kinetic parameters following IV bolus administration blood data, assuming that the drug follows two compartment open model.

13) Discuss about protein binding and various factors affecting drug-protein binding.

PART – C

Note: Answer Five Question.   **(5X8 = 40 Marks)**
14) Discuss the mechanism of Active diffusion in absorption of drugs.

15) How the organ size and perfusion rate influence the drug distribution?

16) Explain briefly about Kinetics of protein binding.

17) Explain factors affecting the renal excretion of drugs.

18) Discuss about *in vitro-in vivo* correlations

19) A drug has a volume of distribution of 12Lts and elimination rate constant of $0.18hr^{-1}$ A steady state concentration of $12\mu g/ml$ is desired. Assuming one compartment kinetics, calculate time required to reach 99% of Css and infusion rate to achieve desired steady state.

20) Write the significance of different volumes of distribution in two compartment model.

21) Write a note on non-linear pharmacokinetics and Michaelis Mention equation.

22) How do you determine absorption rate constant, Ka by Wagner nelson method.

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FACULTY OF PHARMACY

B. Pharmacy VI-Semester (PCI) (Main) Examination, November 2020
Subject : Herbal Drug Technology

Time: 2 Hours   **Max. Marks: 75**

PART – A

Note: Answer Seven Questions.   **(7 X 3 = 21 Marks)**

1) What is Organic farming.

2) Define the term Herbal medicine as per WHO.

3) Mention any six names of Aycervedic preparations (formulations)

4) What is significance of Herbal excipients

5) Write the health benefits of herbal medicines.

6) Define the term Nutraceuticals

7) List the parameters for evaluation of herbal tablets.

8) Define the term patent and IPR.

9) What is schedule T

10) What are antioxidants and give examples.

PART – B

Note: Answer One Question.   **(1X14 = 14 Marks)**

11) Briefly explain the objectives and components of Schedule-T

12) List the Ayurvedic formulations and write the preparation of any three.

13) Explain the WHO guidelines for the assessment of herbal drugs.

PART – C

Note: Answer Five Question.   **(5X8 = 40 Marks)**

14) How will you perform selection and identification of herbal materials?

15) Briefly explain the principles of Homeopathic system of Medicine.

16) Write a note on Functional foods and Dietary supplements.

17) Give informative note on Health benefits of nutraceuticals in management of diabetes.

18) What are excipients and give its classification with examples.

19) What are phytosomes? Give its method of preparation.

20) Give a detailed account of case study of neem and curcumin.

21) Explain the objectives and functions of ASU and DCC.

22) Give an informative note on future prospects of herbal drug industry.

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FACULTY OF PHARMACY

B. Pharmacy VI-Semester (PCI) (Main) Examination, November 2020
Subject : Pharamacology - III

Time: 2 Hours   Max. Marks: 75

PART – A

Note: Answer Seven Questions.   **(7 X 3 = 21 Marks)**

1) What is asthma. Give four examples of drugs used in Asthma

2) What is ulcer. Give four examples of drugs used in ulcer.

3) What is the treatment for organophosphorus poisoning?

4) What is teratogenicity and give examples of drugs causing teratogenic effects.

5) Define Chronopharmacology.

6) What are the uses of sulfa drugs mention any four sulfa drugs.

7) What is amoebiasis Give any four examples of drugs.

8) What is BCG? What for it is used

9) Give two examples for Bronchiodilators and explain how they work?

10) Define Expectorant. Give two examples.

PART – B

Note: Answer One Question.   **(1X14 = 14 Marks)**
11) Classify anticancer agents. Add a note on antimetabolites.
12) Write the symptoms and management of Heavy metal poisoning.
13) Explain the pharmacological role of H_1 and H_2 antihistaminics.

PART – C

Note: Answer Five Question.   **(5X8 = 40 Marks)**
14) Write a note on sulfanamides.
15) Explain about Proton pump Inhibitors.
16) Write a note on Immunosuppressant's.
17) Explain the chemotherapy of Anti-TB drug.
18) Write a note on Penicillins.
19) Write a note on ant tubercular agents.
20) Write a note on antimalarial drugs.
21) Write the pharmacology of respirations stimulants
22) What are the different types of rhythms. Explain about circardian rhythm with
examples.