

II/IV B.PHARMACY DEGREE EXAMINATIONS, JUNE/JULY 2015**Fourth Semester (Regular)****401-PHARMACEUTICAL CHEMISTRY-III (MEDICINAL-I)**

Time: Three Hours Maximum marks: 70

SECTION-A**Answer any FOUR questions.****4X10=40M**

1. Explain how log P, pKa and hydrogen bonding capacity of the drug affects bioactivity?
2. Classify penicillins. Explain the MOA and SAR and clinical applications of penicillins.
3. Write the structure, IUPAC name, MOA and uses of the following.
a) Sulphamethoxazole b) Trimethoprim c) nitrofurazone. d) isoniazid
4. Write in detail on
a) Antifungal antibiotics b) - lactamase inhibitors
5. Classify antiamebics. Explain the MOA and uses of nitroimidazole drugs. Outline the synthesis of metronidazole.
6. Write short notes on
a) NNRTIs b) Alkylating agents

SECTION-B**Answer any TEN questions.****10X3=30M**

7. Write in brief on 4-aminoquinoline antimalarials.
8. Discuss the acid instability of penicillin antibiotic.
9. Write briefly on antibiotics working as protein synthesis inhibitors.
10. Write in brief on the SAR of tetracyclins.
11. Outline synthesis, MOA and uses of norfloxacin.
12. What are macrolide antibiotics? Write in brief on their clinical uses.
13. Differentiate 1st line and 2nd line antitubercular agents.
14. Explain how procarbazine acts as an anticancer agent?
15. How do you achieve the synthesis of carbenicillin from 6-aminopenicillanic acid?
16. Outline the synthesis, MOA and uses of chlorambucil.
17. Write a short note on antimetabolite antiviral agents.
18. Write in brief on vinca alkaloids.

II/IV B.PHARMACY DEGREE EXAMINATIONS, JUNE/JULY 2015**Fourth Semester (Regular)****402-PHYSICAL PHARMACY-II**

Time: Three Hours Maximum marks: 70

SECTION-A**Answer any FOUR questions.****4X10=40M**

1. Name the methods of analysis of complexes and explain the pH titration method.
2. Explain the methods for determination of surface area of powders.
3. Explain the principle of accelerated stability testing and how the shelf life of a product is determined using temperature as stress condition.
4. Define 'Rheology'. Explain non-Newtonian systems of flow and their pharmaceutical applications.
5. Write about the adsorption at liquid interfaces and role of surfactants at these interfaces.
6. a) What are the instability conditions of emulsions and how to prevent them?
b) How will you determine the type of emulsion?

SECTION-B**Answer any TEN questions.****10X3=30M**

7. Define distribution law and write its applications in pharmacy.
8. Differentiate between adsorption and absorption. Mention two applications of adsorption.
9. Write about Nernst potential.
10. Explain Newton's law of flow.
11. What is critical micellar concentration and mention its significance in pharmacy.
12. Define angle of repose and Hausner ratio and mention their significance.
13. Differentiate between zero and first order reactions.
14. Write about sedimentation parameters.
15. The initial concentration of hydrogen peroxide was found to be 86.85% and after 65 minutes it was found that 14.4%. Calculate the specific first order reaction rate constant and the half life of the reaction.
16. Write about the influence of protein binding on drug action.
17. Write about protective colloid action.
18. Write the principle of cup and bob viscometer and mention its limitations.

II/IV B.PHARMACY DEGREE EXAMINATIONS, JUNE/JULY 2015

Fourth Semester (Regular)

(Paper IV) APPLIED BIOCHEMISTRY AND CLINICAL PATHOLOGY

Time: Three Hours Maximum marks: 70

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SECTION-A

Answer any FOUR questions. 4X10=40M

1. Explain the following
 - a) Lipids can be synthesized from Glucose but not vice versa
 - b) Amino acid metabolism provides starting materials for other biosynthetic pathways.
2. Write in detail on high energy compounds.
3. Write a note on the classification and chemistry of carbohydrates. Briefly write on the biochemical role of glycolysis.
4. Define and classify co-enzymes? Explain various co-enzymes present in oxidoreductases.
5. What are hormones? Write in detail on the hormones involved in carbohydrate metabolism.
6. Enlist various tests used to assess liver functionality. Write in detail on principle and clinical significance of serum bile salts, total albumin and SGOT assay.

SECTION-B

Answer any TEN questions. 10X3=30M

7. Differentiate essential and non-essential amino acids.
8. What are the factors controlling lipid metabolism?
9. With a neat diagram explain glucose redistribution pathways in humans.
10. Write brief note on the energetics of Krebs cycle.
11. Explain the functioning and clinical significance of HMC CoA enzyme.
12. Write the principle and significance of serum total cholesterol assay.
13. Explain the biochemical role of creatin.
14. Write in brief on the role of glucagon on glucose metabolism.
15. What are bile pigments? Write briefly on their clinical significance.
16. Explain why bile salts are considered as abnormal constituents in urine?
17. What are ketone bodies? How do they cause acidosis?
18. Write a short note on the role of lymphocytes in health and disease.

II/IV B.PHARMACY DEGREE EXAMINATIONS, JUNE/JULY 2015**Fourth Semester (Regular)****406: FORENSIC PHARMACY**

Time: Three Hours Maximum marks:70

SECTION-A**Answer any FOUR questions.****4X10=40M**

1. What different licenses are granted for the manufacture of drugs and explain the procedure for obtaining the same.
2. What are the qualifications of government analyst and explain the duties.
3. Write about the advantages and disadvantages of manufacture outside bond and explain the working of a non-bonded laboratory.
4. Explain the cultivation and production of opium.
5. a) Write the salient features of prevention of cruelty to animals act.
b) Explain the salient steps for obtaining patent.
6. Write about the constitution and functions of Pharmacy Council of India.

SECTION-B**Answer any TEN questions.****10X3=30M**

7. Define spurious and adulterated drugs and give one example each.
8. Write the qualifications for competent technical staff for manufacture?
9. What are the differences between patent and trade mark?
10. Write about Narcotic drugs and psychotropic substances consultative committee.
11. What are the qualifications for entry into first register?
12. Write about the procedure for issue of alcoholic preparations from the bonded laboratory.
13. How do you fix the price of a formulation under Drug Price Control Order?
14. Write about the handling of prescription by a pharmacist.
15. There is an advertisement relating to cure of AIDS. Write your comment.
16. Match the following:
 1. Schedule H a) Diseased or ailments which a drug may not purport to prevent or cure
 2. Schedule X b) Life period of drugs
 3. Schedule J c) List of prescription drugs
 4. Schedule P d) List of drugs whose import, manufacture and sale, labelling and packing are governed by special provisions 1 P.T.O
17. Write the employee related features under shops and establishment act.
18. Under what conditions a pregnancy can be terminated and who is qualified for doing the same.