

MANIPAL UNIVERSITY**SECOND YEAR B. PHARM. DEGREE EXAMINATION – JULY 2017****SUBJECT: PATHOPHYSIOLOGY (PPR 201T)
(2014 REGULATION)**

Tuesday, July 18, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 70

✍ **Answer ALL the questions.**

✍ **Long answer questions:**

1. Explain the vascular events in acute inflammation.
2. Define Hypertension and explain its etiopathogenesis.
3. Define epilepsy. Classify different types of epilepsy.

(10 marks × 3 = 30 marks)

4. **Short answer questions:**

- 4A. Explain the pathogenesis of tuberculosis.
- 4B. Define atherosclerosis. Explain any four risk factors for atherosclerosis.
- 4C. Describe pathophysiology of Ischemic stroke.
- 4D. Explain type I hypersensitivity reaction.
- 4E. Explain pathophysiology of type I diabetes.
- 4F. Explain cell cycle with neat diagram.

(5 marks × 6 = 30 marks)

5. **Give reasons for the following:**

- 5A. Autolysis process is faster in tissues like pancreas when compared to fibrous tissues.
- 5B. Childhood is the susceptible age group for seizures.
- 5C. Iron deficiency anemia also called as microcytic anemia.
- 5D. Hypertension is an important risk factor for stroke.
- 5E. Invasiveness is a characteristic of cancer cell.

(2 marks × 5 = 10 marks)



MANIPAL UNIVERSITY

SECOND YEAR B. PHARM. DEGREE EXAMINATION – JULY 2017

SUBJECT: PHARMACEUTICAL MICROBIOLOGY (PBT 202T) (2014 REGULATION)

Thursday, July 20, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 70

Answer ALL the questions.

Long answer questions:

1. Enlist and describe nutritional requirements for the cultivation of bacteria.
2. With the help of a neat labelled diagram, describe the design and operation of a laboratory autoclave.
3. Explain the different mechanisms of bacterial resistance to antibiotics.

(10 marks × 3 = 30 marks)

Short answer questions:

- 4A. Write a note on sexual spores of fungi.
- 4B. Define disinfection and explain the properties of an ideal disinfectant.
- 4C. Enlist the methods of bacteriostatic evaluation of disinfectants and explain any one method.
- 4D. Write the principle involved in sterility testing and explain the purpose of positive and negative controls.
- 4E. Write a note on normal microbial flora.
- 4F. Write the causative organism, mode of transmission, important symptoms, prevention and treatment of cholera.

(5 marks × 6 = 30 marks)

Give reasons for the following:

- 5A. Cedar wood oil improves the resolving power of compound light microscope.
- 5B. Bacteriophages are complex viruses.
- 5C. Mosquito, bearing malarial parasite in its salivary gland, bites more number of individuals than a normal mosquito.
- 5D. Tyndallisation is not suitable to sterilise injections containing thermo labile medicaments.
- 5E. Pyrazinamide is well suited to killing mycobacteria within necrotic foci early in infection, but less useful later on when these foci have reduced in number.

(2 marks × 5 = 10 marks)



MANIPAL UNIVERSITY**SECOND YEAR B. PHARM. DEGREE EXAMINATION – JULY 2017****SUBJECT: PHARMACEUTICS (PCE 203T)
(2014 REGULATION)**

Saturday, July 22, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 70

✍ **Answer ALL the questions.**

✍ **Long answer questions:**

1. Explain the principle, construction and working of Airjet mixer with the help of diagram.
2. State Bernoulli's theorem with equation and list the applications. Briefly explain the working of Venturi meter.
3. Define Extraction. Mention six factors that enhance rate of extraction. Describe Reserved percolation process.

(10 marks × 3 = 30 marks)

4. **Short answer questions:**

- 4A. Briefly explain the preparation of Suppositories.
- 4B. Write a short note on Flocculating agents and Suspending agents.
- 4C. Write a note on Mandl's paint with uses.
- 4D. Write the working of Colloid mill with the help of a diagram.
- 4E. Explain Controlled flocculation.
- 4F. Briefly explain the method of preparation of emulsion by dry gum method specifying the important precautions.

(5 marks × 6 = 30 marks)

5. **Give reasons for the following:**

- 5A. Intravenous solutions should be isotonic.
- 5B. Smaller sized particles tend to cake more than larger particles.
- 5C. Liniments are not to be applied on broken skin.
- 5D. Preservatives are used commonly in Liquid orals.
- 5E. Ideal surgical dressing should be porous to water vapor.

(2 marks × 5 = 10 marks)



MANIPAL UNIVERSITY

SECOND YEAR B. PHARM. DEGREE EXAMINATION – JULY 2017

SUBJECT: PHARMACEUTICAL CHEMISTRY (PCH 204T) (2014 REGULATION)

Tuesday, July 25, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 70

✍ **Answer ALL the questions.**

✍ **Long Essays:**

1A. How is quinolinic acid prepared from quinoline? Explain the Knorr synthesis of quinoline.

1B. Discuss in detail atropisomerism.

1C. Write the structure of benzofuran and benzimidazole.

(4+5+1 = 10 marks)

2A. What are the objections for the open chain structure of Glucose? Explain the cyclic structure of D-glucose.

2B. What are peptides? Give two methods of preparation of amino acids.

((3+3)+4 = 10 marks)

3A. Explain the structural elucidation of atropine.

3B. Discuss the chemistry of camphor.

(6+4 = 10 marks)

4. **Short answer questions:**

4A. Why Pyridine undergoes nucleophilic reactions readily? Explain with an example.

4B. Write the structure and uses of the following:

i) Isoniazid ii) Phenytoin iii) 5-fluorouracil iv) Sulphamethoxazole

4C. Explain the method of preparation and uses of sodium bicarbonate and zinc stearate.

4D. What are glycosides? Explain the chemistry of cardiac glycosides.

4E. Give the method of preparation of any two calcium containing inorganic compounds and give their uses.

4F. Write the preparation and uses of oxygen and nitrous oxide. How is it labelled and stored?

(5 marks × 6 = 30 marks)

5. **Give reasons for the following:**

5A. Phenyl oxazoles get nitrated in the phenyl ring.

5B. Pyridazine show less reactivity towards electrophilic aromatic reactions.

5C. The C-N bond of peptide has some double bond character.

5D. Oils have lower melting point than fats.

5E. Papaverine on reaction with HI at 126°C gives papaveroline along with four molecules of methyl iodide. Give reason with reaction.

(2 marks × 5 = 10 marks)



MANIPAL UNIVERSITY**SECOND YEAR B. PHARM. DEGREE EXAMINATION – JULY 2017****SUBJECT: PHARMACEUTICAL CHEMISTRY (PCH 204)
(CREDIT BASED SYSTEM)**

Tuesday, July 25, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ **Answer ALL the questions.**

✍ **Long Essays:**

1A. Explain the structural elucidation of ephedrine.

1B. Give the structure and biological importance of β -carotene.

(6+2 = 8 marks)

2A. How do you convert glucose to fructose? Explain the limitations of open chain structure of glucose proposed by Fischer.

2B. Explain any two methods to synthesise amino acids.

(4+4 = 8 marks)

3A. Explain Hantzsch pyridine synthesis.

3B. Explain nucleophilic substitution reactions of pyridine with suitable examples.

3C. Give the structure of one pyrazine derivative with antitubercular activity.

(4+3+1 = 8 mark)

4. **Short Essays:**

4A. Write the synthesis of alpha terpeniol.

(4 marks)

4B. i) Give the structure and important biological effects of caffeine and theophylline.

ii) What are the medicinal importance of flavonoids and taxol?

(2+2 = 4 marks)

4C. Discuss the stereochemistry of disubstituted cyclohexane.

(4 marks)

4D. Explain the chemistry of cardiac glycosides.

(4 marks)

5. **Short Answers:**

5A. Write two chemical reactions of camphor.

5B. What are nucleosides and nucleotides? Give examples.

5C. Explain the hydrolysis reactions of fats and oils. Give its significance.

5D. Draw the structures of two phenothiazine derivative and mention their uses.

5E. Differentiate Diazines from Diazoles with examples.

(2 marks \times 5 = 10 marks)



MANIPAL UNIVERSITY**SECOND YEAR B. PHARM. DEGREE EXAMINATION – JULY 2017****SUBJECT: PHARMACEUTICAL MANAGEMENT (PMA 205T)
(2014 REGULATION)**

Thursday, July 27, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 70

✍ **Answer ALL the questions.**

✍ **Long answer questions:**

1. Discuss Managerial Roles developed by Mintzberg.
2. With a neat labelled diagram explain characteristics of different stages of Product Life Cycle.
3. Discuss all Accounting Concepts with suitable examples.

(10 marks × 3 = 30 marks)

4. **Short answer questions:**

- 4A. Define Conflict. Discuss Functional and Dysfunctional Conflict.
- 4B. Discuss in brief about Healthcare Market Scenario in India.
- 4C. Discuss different pricing strategies adopted by marketing organizations.
- 4D. List ten principles of Economics and explain principles relating to 'How people interact'.
- 4E. Write the factors influencing the selection of an ideal location to setup a Pharmaceutical Unit.
- 4F. What are the functions of an Entrepreneur?

(5 marks × 6 = 30 marks)

5. **Give reasons for the following:**

- 5A. Decision making is neither Rational nor Irrational.
- 5B. What is Cash Book? Write its specimen format.
- 5C. What is AIDA principle of Communication?
- 5D. Importance of understanding Economics.
- 5E. Write DMAIC roadmap of Six Sigma.

(2 marks × 5 = 10 marks)



MANIPAL UNIVERSITY

SECOND YEAR B. PHARM. DEGREE EXAMINATION – JULY 2017

SUBJECT: PHARMACEUTICAL ANALYSIS (PQA 205) (CREDIT BASED SYSTEM)

Thursday, July 27, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ **Long Essays:**

1. Explain Nernst equation and factors affecting Nernst equation in detail with relevant examples.
2. Explain the indicator errors and their types in neutralization titration.
3. Explain the factors affecting the completeness of the precipitation. How is it checked?

(8 marks × 3 = 24 marks)

4. **Short Essay:**

- 4A. Explain in detail principle of back and replacement complexometric titration with an example each.
- 4B. Classify Errors and explain them in brief.
- 4C. Explain the principle for estimation of halogen acid salts of bases by non-aqueous titration with an example.
- 4D. What is an argentometric titration? Describe Volhard's method in detail.

(4 marks × 4 = 16 marks)

5. **Short Answer:**

- 5A. What are the advantages and disadvantages of starch as an indicator in Iodine Titration?
- 5B. Name any four washing solutions for washing of precipitate in gravimetry.
- 5C. Write the chemical reaction for the external indicator used for determination of completion of diazotization.
- 5D. $0.041 \times 9.0567 \times 0.07654 \times 2.986 \times 0.22222222 = ?$
- 5E. Write a short note on chromophore theory of acid base indicators.

(2 marks × 5 = 10 marks)



MANIPAL UNIVERSITY**SECOND YEAR B. PHARM. DEGREE EXAMINATION – JULY 2017****SUBJECT: PHARMACOGNOSY - II (PCO 206T)
(2014 REGULATION)**

Saturday, July 29, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 70

✍ **Answer ALL the questions.**

✍ **Long answer questions:**

1. Give the pharmacognostic report of Ginger.
2. Elaborate on maceration and percolation
3. Define Volatile oils. Give general properties and classification of volatile oils.

(10 marks × 3 = 30 marks)

4. **Short answer questions:**

- 4A. Give source and structures of any two drugs having cardiovascular, anticancer and antiviral property from marine source.
- 4B. Describe Shikimic acid pathway and their significance in the biosynthesis of secondary metabolites.
- 4C. List out ideal requirements for sweeteners. Discuss any two non-saccharide natural sweetening agents in detail.
- 4D. Describe the collection, method of preparation, chemical constituents and uses of Guggul.
- 4E. Give the source, morphology chemical constituents and uses of Vaj.
- 4F. What are allergenic extracts? Discuss various stages involved in the preparation of allergenic extracts.

(5 marks × 6 = 30 marks)

5. **Give reasons for the following:**

- 5A. Red Squill is lethal only to rats
- 5B. American Podophyllum has cathartic action
- 5C. Terpeneless volatile oils fetch more price in perfumery industry
- 5D. Carbon dioxide is most safe and popular super critical fluid
- 5E. Soxhlet extraction process is preferred over maceration and percolation

(2 marks × 5 = 10 marks)

