

MANIPAL UNIVERSITY**SECOND YEAR B. PHARM. DEGREE EXAMINATION – JULY/AUGUST 2015****SUBJECT: PATHOPHYSIOLOGY (PTH 201)
(CREDIT BASED SYSTEM)**

Tuesday, July 21, 2015

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ Answer ALL questions.**✍ Long Essays:**

- 1A. Define Bronchial asthma. Enumerate four triggering factors of Bronchial asthma.
1B. Explain the pathogenesis of asthma with diagrammatic representation.
1C. Enumerate the clinical symptoms of asthma. (3+3+2 = 8 marks)
- 2A. Explain the structural, cellular and metabolic changes that occur during necrosis.
2B. Explain the mechanism involved during apoptosis.
2C. Enumerate and explain any two degenerative changes that occur in reversible cell injury. (4+2+2 = 8 marks)
- 3A. Define epilepsy. Enumerate four etiological factors for epilepsy.
3B. Describe the pathophysiology of epilepsy.
3C. Classify epilepsy based on the clinical symptoms and explain any two types. (2+2+4 = 8 marks)

4. Short Essays:

- 4A. Describe the pathophysiology of tuberculosis. Enumerate the clinical features of tuberculosis.
4B. Define diabetes mellitus. Explain the short and long term complications of diabetes mellitus.
4C. Explain any four mechanisms of autoimmune diseases with suitable examples.
4D. Explain the etiopathogenesis of Peptic Ulcer Disease. (4 marks × 4 = 16 marks)

5. Short Answer:

- 5A. Explain the differences between microcytic and macrocytic anemias.
5B. Enumerate the changes that take place at the last stage of acute inflammation.
5C. Enumerate four clinical features of hyperthyroidism.
5D. Diagrammatically explain the life cycle of Human Immunodeficiency Virus.
5E. Enumerate four clinical symptoms of malaria. (2 marks × 5 = 10 marks)



MANIPAL UNIVERSITY
SECOND YEAR B. PHARM. DEGREE EXAMINATION – JULY/AUGUST 2015
SUBJECT: PHARMACEUTICAL MICROBIOLOGY (PBT 202)
(CREDIT BASED SYSTEM)

Thursday, July 23, 2015

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ **Answer ALL the questions.**

✍ **Put question numbers properly with margin.**

✍ **Long Essays:**

1. With the help of a neat labeled diagram, discuss the structure of a typical bacterial cell.
2. Discuss sterilisation by Gamma radiations as under:
Source, sterilisation dose, mechanism of action, and applications
3. Explain the principle, procedure and applications of Wassermann test.
(8 marks × 3 = 24 marks)

4. **Short Essays:**

- 4A. Explain the lytic cycle of viral replication.
- 4B. Enlist the factors influencing the course of disinfection process and explain the effect of time of contact on disinfection.
- 4C. Enlist the factors affecting normal microbial flora and explain any two factors in detail.
- 4D. Write the causative agent, mode of transmission, important symptoms, prevention and treatment of whooping cough.
(4 marks × 4 = 16 marks)

5. **Short Answer:**

- 5A. Name any two scientists and their major contribution to the field of microbiology.
- 5B. Mention the reasons for the thermal resistance of bacterial endospores.
- 5C. Write the principle of Tyndallisation.
- 5D. Moisture is essential but a little better than a lot in case of ethylene oxide sterilization. Why?
- 5E. Enlist the various biochemical types of microorganisms in milk with one specific example each.
(2 marks × 5 = 10 marks)



MANIPAL UNIVERSITY

SECOND YEAR B. PHARM. DEGREE EXAMINATION – JULY/AUGUST 2015

SUBJECT: PHARMACEUTICAL TECHNOLOGY (PCE 203)
(CREDIT BASED SYSTEM)

Saturday, July 25, 2015

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ **Answer ALL the questions.**

✍ **Long Essays:**

1. Define prescription. Explain various parts and handling of prescription.
2. Define and classify emulsions. Explain the different tests carried out to identify emulsion type.
3. Explain the principle, construction, working of vacuum distillation.

(8 marks × 3 = 24 marks)

4. **Short Notes:**

- 4A. Explain the working of fluidized bed dryer.
- 4B. Explain double cone classifier.
- 4C. Describe the various types of suspensions with examples.
- 4D. Explain eutectic and explosive powders.

(4 marks × 4 = 16 marks)

5. **Short Answers:**

- 5A. Differentiate between orifice meter and venture meter.
- 5B. Define Duhring's rule.
- 5C. Define unit operation and unit process.
- 5D. Classify incompatibilities with examples.
- 5E. Define displacement value with an example.

(2 marks × 5 = 10 marks)



MANIPAL UNIVERSITY

SECOND YEAR B. PHARM. DEGREE EXAMINATION – JULY/AUGUST 2015

SUBJECT: PHARMACEUTICAL CHEMISTRY (PCH 204)
(CREDIT BASED SYSTEM)

Tuesday, July 28, 2015

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ **Answer ALL questions.**

✍ **Long Essays:**

- 1A. How do you prove that D-glucose has 6 carbon atoms and five hydroxide groups? Explain.
1B. Write the reaction involved in the conversion of pentose to fructose.
1C. Write the structure of lactose and sucrose.

(3+4+1 = 8 marks)

2A. Explain the structural elucidation and synthesis of vitamin-A.

2B. Give the structure and medicinal uses of reserpine.

(6+2 = 8 marks)

3A. Discuss the stereochemistry of biphenyl compounds.

3B. Explain the electrophilic substitution reactions of furan.

(4+4 = 8 marks)

4. **Short Essays:**

4A. Explain any two methods for the synthesis of alpha-amino acids.

4B. Discuss the chemistry of atropine.

4C. Write the skraup synthesis of quinolone and write the structure of chloroquine.

4D. What are the structural difference between nucleosides and nucleotides? Explain with example.

(4 marks × 4 = 16 marks)

5. **Short Answers:**

5A. What are cardiac glycosides? Give an account of cardenolides and bufadienolides.

5B. Give two important reactions of alpha terpineol.

5C. Give the general structures of flavonoids and lignans.

5D. Write the structure and uses of frusemide and metronidazole.

5E. Outline one method of synthesis of acridine.

(2 marks × 5 = 10 marks)



MANIPAL UNIVERSITY

SECOND YEAR B. PHARM. DEGREE EXAMINATION – JULY/AUGUST 2015

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

Thursday, July 30, 2015

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ Answer ALL the questions.

✍ Long Essays:

1. Explain the titration curve of strong acid Vs strong base with the special emphasis on pH at different points and suggesting a suitable indicator.

(8 marks)

2A. Explain drying and ignition of precipitate with suitable example.

2B. Write a note on precipitated form and weighed form with respective requirements.

(4+4 = 8 marks)

3A. Why hydrochloric acid is not used in permanganometry titrations? Explain in detail.

3B. What are the conditions for iodometry titrations.

(4+4 = 8 marks)

4. Short Essay:

4A. How is silver determined by complexometric titration? Explain in details.

4B. Explain the principle of non-aqueous titration of weak bases with an example.

4C. Define the term calibration. Explain the calibration of 50 ml volumetric flask.

4D. Explain the preparation and standardization of 0.1M ammonium thiocyanate solution.

(4 marks × 4 = 16 marks)

5. Short Answer:

5A. Explain principle and reaction for standardization 0.1M sodium nitrite.

5B. What are absolute and derived standards?

5C. Explain Nernst equation.

5D. Name any four washing solutions for washing of precipitate in gravimetry.

5E. Define the terms:

i) % w/v

ii) % v/v

iii) % w/w

iv) % v/w

(2 marks × 5 = 10 marks)



MANIPAL UNIVERSITY**SECOND YEAR B. PHARM. DEGREE EXAMINATION – JULY/AUGUST 2015****SUBJECT: PHARMACOGNOSY - I (PCO 206)
(CREDIT BASED SYSTEM)**

Saturday, August 01, 2015

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ **Answer ALL the questions.**

✍ **Draw neat labeled diagrams and structures wherever necessary.**

✍ **Long Essays:**

1. What are carbohydrates? Discuss the chemistry and uses of carbohydrates.
2. Discuss different methods of drying and storage of crude drugs.
3. Write the Botanical source, Family, Chemical constituents, Uses, Morphology, Microscopy and powder characteristics of Ginger.

(8 marks × 3 = 24 marks)

4. **Short Essays:**

- 4A. Definition, classification and estimation of Tannins
- 4B. Explain the process of TCA cycle.
- 4C. Discuss in detail the microscopic methods of evaluation.
- 4D. Give the source, method of preparation and uses of Cocoa butter.

(4 marks × 4 = 16 marks)

5. **Short Answers:**

- 5A. Define and list out different methods of adulteration.
- 5B. Define Volatile oils with examples.
- 5C. Merits and demerits of chemotaxonomy
- 5D. General tests for proteins
- 5E. Kaolin

(2 marks × 5 = 10 marks)

