

MANIPAL UNIVERSITY**THIRD YEAR B. PHARM. DEGREE EXAMINATION – MAY 2014****SUBJECT: HOSPITAL AND COMMUNITY PHARMACY (PPR 301)
(CREDIT BASED SYSTEM)**

Tuesday, May 06, 2014

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

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

1. What is Hospital Pharmacy? Explain the organization of hospital Pharmacy in the large hospital.
2. Enumerate various methods of drug distribution to inpatients and explain any two methods with its advantages and disadvantages.
3. Discuss the Schedule N requirement to start a community pharmacy.

(8 marks×3 = 24 marks)

✍ Short Essays:

- 4A. Explain ABC method of inventory control.
- 4B. Explain the application of computers in hospital pharmacy.
- 4C. What is essential drug concept? Explain its advantages.
- 4D. Define drug information and enumerate the steps of the modified systematic approach to provide drug information.

(4 marks×4 = 16 marks)

✍ Short Answers:

- 5A. Mention the contents of patient information leaflet.
- 5B. Enlist the barriers to communication skills.
- 5C. Enlist the members of infection committee.
- 5D. Mention two radiopharmaceuticals with its use.
- 5E. Enumerate various types of records maintained in the community pharmacy.

(2 marks×5 = 10 marks)



MANIPAL UNIVERSITY

THIRD YEAR B. PHARM. DEGREE EXAMINATION – MAY 2014

SUBJECT: PHARMACEUTICAL BIOTECHNOLOGY (PBT 302)
(CREDIT BASED SYSTEM)

Thursday, May 08, 2014

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ Answer ALL the questions. Draw neat labeled diagrams wherever necessary.

✍ Long Essays:

1. Discuss the production and recovery of industrial alcohol.
2. Discuss the steps involved in rDNA technology and add a note on key enzymes required for the production of recombinant proteins.
3. Explain the production and standardization of ACTH.

(8 marks×3 = 24 marks)

✍ Short Essays:

- 4A. What are the basic components of media used in animal tissue culture?
- 4B. Explain the production of BCG vaccine.
- 4C. Write a note on economic and technical advantages of microbial enzymes over plant and animal enzymes.
- 4D. Explain the working and advantages of a rotary drum filter.

(4 marks×4 = 16 marks)

✍ Short Answers:

- 5A. Differentiate between traditional and modern biotechnology.
- 5B. What are interleukins?
- 5C. Mention the important characteristics of an ideal plasma substitute.
- 5D. What is the principle behind turbidimetric assay of antibiotics?
- 5E. What are the advantages and limitations for using glass as a material of plant construction?

(2 marks×5 = 10 marks)



MANIPAL UNIVERSITY

THIRD YEAR B. PHARM. DEGREE EXAMINATION – MAY 2014

SUBJECT: PHYSICAL PHARMACEUTICS AND BIOPHARMACEUTICS (PCE 303)
(CREDIT BASED SYSTEM)

Saturday, May 10, 2014

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ **Answer all the questions.**

✍ **Long Essays:**

1. What are adsorption isotherms? Explain Langmuir adsorption isotherm. (8 marks)
2. Explain the pH partition hypothesis and its limitations. What is the significance of volume of distribution? (6+2 = 8 marks)
3.
 - i) Explain Andreasen pipette method for the determination of particle size.
 - ii) Deduce the units for specific zero order rate constant. (4+4 = 8 marks)

✍ **Short Essays:**

- 4A. Write about the glucuronic acid conjugation reaction.
- 4B. Explain any four methods to enhance bioavailability.
- 4C. Explain the caffeine complexes with suitable examples.
- 4D. Define dissolution. Explain an official method of dissolution testing as per IP. (4 marks×4 = 16 marks)

✍ **Short Answers:**

- 5A. What are sedimentation parameters? Explain.
- 5B. Discuss the stability of colloids under Schulze hardy rule.
- 5C. What is the difference between dilatant and pseudoplastic flow? Explain
- 5D. What do you understand by creaming in emulsions? How can it be prevented?
- 5E. Discuss biliary excretion of drugs. (2 marks×5 = 10 marks)



MANIPAL UNIVERSITY

THIRD YEAR B. PHARM. DEGREE EXAMINATION – MAY 2014

SUBJECT: MEDICINAL CHEMISTRY – I (PCH 304)
(CREDIT BASED SYSTEM)

Tuesday, May 13, 2014

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ Answer ALL the questions.

✍ Long Essays:

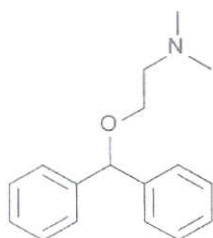
1A. Explain any three Phase-II reactions involved in drug metabolism.

1B. Explain the different types of receptors present in our body.

(4+4 = 8 marks)

2A. Give the synthesis, physical property and uses of cocaine.

2B. Give the synthesis, IUPAC name and use of the following drug.



((2+1+1)+4 = 8 marks)

3A. Enlist the SAR features of adrenergic blockers. Write the method of synthesis of terbutaline.

3B. What are reversible anticholinesterases? Give examples. Give the mechanism of reversible anticholinesterase drugs.

(4+4 = 8 marks)

✍ Short Essays:

4A. Define and explain the significance of Isosterism property of drug on its biological property.

(4 marks)

4B. Classify general anesthetics with examples. Outline the synthesis any two general anesthetics, one from each class.

(4 marks)

4C. i) Give the physical property and uses of Cimetidine.

ii) Classify NSAID's giving one example for each class.

((1+1)+2 = 4 marks)

4D. Discuss the structural changes that were attempted on morphine.

(4 marks)

✍ Short Answers:

5A. Classify antidepressants and give examples.

5B. Name the various leukotrienes that are synthesized via lipoxygenase pathway.

5C. Give any two important SAR features of anticholinergic drugs.

5D. How do you synthesize phenytoin sodium?

5E. Outline the synthesis of: i) Meprobamate ii) Chlorphenesin

(2 marks×5 = 10 marks)



MANIPAL UNIVERSITY

THIRD YEAR B. PHARM. DEGREE EXAMINATION – MAY 2014

SUBJECT: PHARMACOLOGY – I (PHA 305)
(CREDIT BASED SYSTEM)

Thursday, May 15, 2014

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ Answer ALL questions and draw diagrams wherever necessary.

✍ Long Essays:

1. Classify the routes of drug administration with examples. Explain the factors that govern the choice of route of drug administration. List the advantages and disadvantages of oral route.
(3+3+ 2 = 8 marks)
2. With the help of a diagram, explain cholinergic neurotransmission and indicate the different drugs affecting it.
(8 marks)
3. Explain the absorption, transport, storage and utilization of iron. Give the indications for parenteral iron therapy and list the adverse effects of iron.
(5+2+1 = 8 marks)

✍ Short Essays.

- 4A. Describe the cellular mechanism of action of nitroglycerin
- 4B. Write the mechanism of action of spironolactone with a diagram
- 4C. Explain the cellular mechanism of action of insulin.
- 4D. Explain the mechanism of action of: i) Propylthiouracil ii) Tamoxifen
(4 marks×4 = 16 marks)

✍ Give reasons for the following:

- 5A. ACE inhibitors produce dry cough.
- 5B. Ergot derivatives should not be used in patients with peripheral vascular disease.
- 5C. Normal doses of theophylline fail to show adequate response in patients who are on phenytoin therapy.
- 5D. Adenosine is a preferred drug for the treatment of paroxysmal supraventricular tachycardia.
- 5E. Neostigmine is preferred to physostigmine for the treatment of myasthenia gravis.
(2 marks×5 = 10 marks)



MANIPAL UNIVERSITY

THIRD YEAR B. PHARM. DEGREE EXAMINATION – MAY 2014

SUBJECT: PHARMACOGNOSY- II (PCO 306)
(CREDIT BASED SYSTEM)

Saturday, May 17, 2014

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ **Answer all questions. Draw neat labeled diagrams and structure wherever necessary.**

✍ **Long Essays:**

1. Write a pharmacognostic report on clove.
2. Define glycosides. Write a detailed account anthracene glycosides.
3. Give the source, chemical constituents, uses, method of preparation and chemical tests for colophony.

(8 marks×3 = 24 marks)

✍ **Short Essays:**

- 4A. Describe the different physical methods used for the evaluation of volatile oils.
- 4B. Explain the maceration process. Add a note on factors affecting the same.
- 4C. Explain the chemistry of strophanthus.
- 4D. Explain the biogenesis of Prunasin and Amygdalin.

(4 marks×4 = 16 marks)

✍ **Short Answers:**

- 5A. Thin layer chromatography
- 5B. Source, active constituents and uses of cardamom
- 5C. Botanical source active constituents and uses of senega
- 5D. Grafting methods
- 5E. Powder characters of Licorice

(2 marks×5 = 10 marks)



MANIPAL UNIVERSITY

THIRD YEAR B. PHARM. DEGREE EXAMINATION – MAY 2014

SUBJECT: PHARMACOGNOSY- II (PCO 306)
(MAHE SYLLABUS)

Saturday, May 17, 2014

Time: 10:00 – 13:00 Hrs.

Max. Marks: 75

✍ **Answer all questions**

✍ **Draw well labeled diagrams wherever necessary.**

✍ **Short Essays:**

- 1A. Give the biogenesis of Ergot alkaloids.
- 1B. What are Saponins? Give the source, chemical constituents and uses of Senega and Sarsaparilla.
- 1C. Outline the Shikimic acid pathway and discuss their role in the aromatic biosynthesis.
- 1D. Explain the method of cultivation and collection of Cinnamon.
- 1E. Give the general method of isolation and estimation of Anthracene glycosides.
- 1F. Give the morphological characters of Fennel and Eucalyptus.
- 1G. Describe the powder microscopy of Digitalis and Rhubarb.

(5 marks×7 = 35 marks)

✍ **Long Essays:**

- 2A. Write an essay on cultivation, methods of preparation and chemical tests of Aloes.
- 2B. Give the classification and describe general methods of extraction of Volatile oils.
- 2C. Give an account of extraction of Glycosides and alkaloids from natural source. Write a note on qualitative identification tests for Alkaloids, Tannins and Steroids.
- 2D. What are Resins? Give the chemistry, properties and methods of extraction.

(10×4 = 40 marks)



MANIPAL UNIVERSITY**THIRD YEAR B. PHARM. DEGREE EXAMINATION – MAY 2014****SUBJECT: PHARMACEUTICAL JURISPRUDENCE (PMA 307)****(CREDIT BASED SYSTEM)**

Tuesday, May 20, 2014

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

☞ Answer all the questions.**☞ Long Essays:**

- 1A. What qualifications would entitle a person to register his name in the first and subsequent Registers and under what circumstances can the name of a registered pharmacist could be removed from the register.
- 1B. Explain the calculation of retail price of a new drug for existing manufacturers of scheduled formulations as per DPCO 2013. Add a note on NPPA.
- 2A. Discuss briefly about manufacture, sale and export of opium.
- 2B. Define “Bonded Manufactory” and “Non Bonded Manufactory” and write about “Disposal of recovered alcohol” under The Medicinal and Toilet Preparations Act.
- 3A. Give a brief account of schedules:
i) Schedule C ii) Schedule G iii) Schedule X iv) Schedule H
- 3B. What are Clinical Trials? Explain Phase-I, Phase-II, Phase-III and Phase-IV of clinical trials.
(8 marks×3 = 24 marks)

☞ Short Essays:

- 4A. i) Write short notes on recommendations made by Drugs Enquiry Committee.
ii) What ethics should a pharmacist follow in relation to medical profession and his profession?
(2+2 = 4 marks)
- 4B. i) Define “Drug” and “Magic Remedies” according to Drugs and Magic Remedies (Objectionable Advertisement) Act, 1954.
ii) Write short notes on statutory functions of CDSCO.
(2+2 = 4 marks)
- 4C. i) Describe salient features of Sales Promotion Employees Act.
ii) Define Food. What were objectives of passing Prevention of Food Adulterations Act?
(2+2 = 4 marks)
- 4D. Explain Patent Filing Procedure and various stages involved in it.
(4 marks)

☞ Short Answers:

- 5A. Under what circumstances 12 weeks old and 12 weeks but not more than 20 weeks old pregnancy can be terminated?
- 5B. Enlist the functions of AICTE Act.
- 5C. Write short notes on Registration of Establishment under The Bombay Shops and Establishments Act, 1948.
- 5D. Outline the members of Institutional Animal Ethics Committee.
- 5E. Which are the agencies and authorities established under the Insecticides Act?
(2 marks×5 = 10 marks)

