

MANIPAL UNIVERSITY

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

SUBJECT: HOSPITAL AND COMMUNITY PHARMACY (PPR 301)

(CREDIT BASED SYSTEM)

(NEW REGULATION)

Monday, July 20, 2015

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ Answer ALL the questions.

✍ Long Essay Type Questions:

1. What is rational drug use? Explain the factors contributing irrational drug use and strategies to overcome the same.
2. Define economic order quantity level. Explain different methods of calculating economic order quantity.
3. Define Pharmacy Therapeutic committee and explain the role of PTC in Drug Product Defect Reporting Programme and Drug Utilization Review.

(8 marks × 3 = 24 marks)

4. Short Essay Type Questions:

- 4A. Draw an overall activity chart of hospital pharmacy.
- 4B. Explain setting standards for good pharmacy practice.
- 4C. Define unit dose. Explain the procedure for unit dose drug distribution system.
- 4D. Explain the application of computers in hospital pharmacy.

(4 marks × 4 = 16 marks)

5. Short Answer Questions:

- 5A. Mention the criteria for selection of drugs in hospital formulary.
- 5B. Mention two radiopharmaceuticals with its therapeutic applications.
- 5C. Explain different types of records to be maintained by the community pharmacy.
- 5D. Enlist the type of research that can be carried out in the outpatient pharmacy.
- 5E. What are the storage conditions for drugs as per Indian Pharmacopoeia?

(2 marks × 5 = 10 marks)



MANIPAL UNIVERSITY**THIRD YEAR B. PHARM. DEGREE EXAMINATION – JULY/AUGUST 2015****SUBJECT: PHARMACEUTICAL BIOTECHNOLOGY (PBT 302)
(CREDIT BASED SYSTEM)**

Wednesday, July 22, 2015

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

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

✍ **Long Essay Questions:**

1. With a neat labeled diagram, explain the operation of an industrial fermenter.
2. Explain the steps involved in amplifying a template DNA by PCR. What are the requirements of PCR?
3. Discuss the production and storage of Poliomyelitis vaccine.

(8 marks × 3 = 24 marks)

4. **Short Essay Questions:**

- 4A. In hybridoma technology, how the selection of hybrid cells is achieved?
- 4B. Explain the Kendrick test used for standardization of vaccines.
- 4C. Write a note on therapeutic applications of enzymes.
- 4D. Explain the working principle and applications of Chamber press.

(4 marks × 4 = 16 marks)

5. **Short Answer Questions:**

- 5A. Name the scientist who coined the term 'Biotechnology'. Mention any two contributions of Louis Pasteur.
- 5B. What are Cosmid vectors?
- 5C. What is the difference in cultural conditions for making industrial alcohol and Baker's yeast?
- 5D. Mention the conditions for obtaining fibrinogen from plasma fractionation.
- 5E. What are the advantages and disadvantages for using Aluminium as a material of plant construction?

(2 marks × 5 = 10 marks)



MANIPAL UNIVERSITY

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

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

Monday, July 27, 2015

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ Answer ALL the questions.

✍ Long Essays:

- 1A. Define and explain the significance of isomerism on biological activity of a drug.
 1B. Explain the different forces and theories involved in drug receptor interactions. (4+4 = 8 marks)
- 2A. Give the synthesis, and IUPAC name of Procaine.
 2B. Give the synthesis, IUPAC name and uses of diphenhydramine. (4+4 = 8 marks)
- 3A. Classify adrenergic blockers with one example for each class. Write the method of synthesis of salbutamol.
 3B. Write the synthesis and explain the mechanism of action of pralidoxime. (4+4 = 8 marks)

4. Short Essays:

- 4A. What are antianxiety agents? Outline the synthesis of Chlordiazepoxide and Lorazepam. (4 marks)
- 4B. Classify general anesthetics with one example giving its structure. Outline the synthesis of one general anesthetic. (4 marks)
- 4C. i) Discuss the general structural requirements for H₁ receptor antagonists.
 ii) What are the different mechanisms by which NSAIDs act? Explain. (2+2 = 4 marks)
- 4D. Outline the synthesis of: i) Ibuprofen ii) Diclofenac (4 marks)

5. Short Answers:

- 5A. Write the structure, IUPAC name and use of the following compounds:
 i) Pentobarbital ii) Baclofen
- 5B. Write any two important SAR features of antiepileptic hydantoin
- 5C. Classify cholinergic blockers giving examples.
- 5D. How do you synthesise trimethadione?
- 5E. What are antidepressants? Give the structure of imipramine. (2 marks × 5 = 10 marks)



MANIPAL UNIVERSITY**THIRD YEAR B. PHARM. DEGREE EXAMINATION – JULY/AUGUST 2015****SUBJECT: PHARMACOLOGY – I (PHA 305)
(CREDIT BASED SYSTEM)**

Wednesday, July 29, 2015

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ **Answer ALL questions**

✍ **Draw diagrams wherever necessary.**

✍ **Long Essay Questions:**

1. With the help of a diagram, explain the mechanism of action of digitalis. Mention its adverse effects and uses. (5+1+2 = 8 marks)
2. Explain the signal transduction by G-protein coupled receptors. (8 marks)
3. Explain the mechanism of action of warfarin. List its side effects and uses. (4+2+2 = 8 marks)

4. **Short Essay Questions:**

- 4A. Describe the mechanism of action of hydrochlorothiazide
- 4B. Explain the mechanism of action of carbamate anticholinesterases.
- 4C. Explain the mechanisms of action of: i) Carbimazole ii) Gemfibrozil
- 4D. Write the mechanism of action of triptans. Give their uses and side effects. (4 marks × 4 = 16 marks)

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

- 5A. Mannitol is contraindicated in acute renal failure
- 5B. Non-selective beta blockers are not generally prescribed for diabetics
- 5C. Rocuronium is preferred to d-Tubocurarine for skeletal muscle relaxant action
- 5D. Combined oral contraceptive pill is contraindicated in thromboembolism
- 5E. Theophylline produces cardiac arrhythmias in high doses. (2 marks × 5 = 10 marks)



MANIPAL UNIVERSITY

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

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

Friday, July 31, 2015

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ Answer ALL questions.

✍ Draw neat labeled diagrams and structure wherever necessary.

✍ Long Essays:

1. Present Digitalis under suitable Pharmacognostic scheme.
2. Give the pharmacognostic report on coriander.
3. What are Resins? Classify them with examples. Write a note on preparation of various types of Resins.

(8 marks × 3 = 24 marks)

4. Short Essays:

- 4A. Describe the principle and procedure involved in Gas liquid chromatography (GLC).
- 4B. Give the source and morphology of:
 - i) Vlerian
 - ii) Cardamom
- 4C. Describe the cultivation, collection and preparation of Dioscorea.
- 4D. Write a note on Precursor product sequence.

(4 marks × 4 = 16 marks)

5. Short Answer:

- 5A. Give the steps involved in the biogenesis of prunasin.
- 5B. Principle involved in paper chromatography
- 5C. Give the general qualitative identification tests for alkolooides.
- 5D. Botanical source, Chemical constituents and uses of Wild cherry bark
- 5E. Differentiate Siam Benzoin from Sumatra Benzoin

(2 marks × 5 = 10 marks)



MANIPAL UNIVERSITY**THIRD YEAR B. PHARM. DEGREE EXAMINATION – JULY/AUGUST 2015****SUBJECT: PHARMACEUTICAL JURISPRUDENCE (PMA 307)
(CREDIT BASED SYSTEM)**

Monday, August 03, 2015

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ Long Essay Questions:

- 1A. Describe the grounds and procedure for removal of name from the “Register” as specified under Pharmacy Act 1948.
- 1B. Discuss in brief the amendments of DPCO. Add a note on functions of NPPA. (8 marks)
- 2A. Define the following according to the Narcotic Drugs and Psychotropic Substances Act:
i) Charas ii) Manufactured Drug iii) Medicinal Hemp iv) Opium
- 2B. Explain warehousing of alcoholic preparations under Medicinal and Toilet Preparations Act. (8 marks)
- 3A. Describe the constitution and functions of The Drugs Consultative Committee.
- 3B. Write briefly about Clinical Trials. (8 marks)

4. Short Note Questions:

- 4A. i) Write short notes on Pharmaceutical Enquiry Committee.
ii) Discuss in brief the ethics that a pharmacist should observe in relation to his Job and Trade. (2+2 = 4 marks)
- 4B. i) Specify the objectives of Drugs and Magic Remedies (Objectionable Advertisement) Act, 1954 and describe briefly offences and penalties provided under the Act.
ii) Write short notes on Japan’s Drug Regulatory Authority. (3+1 = 4 marks)
- 4C. i) What qualifications are mandatory to become a Food Inspector?
ii) Define “Sales Promotion Employee” as per the Sales Promotion Employees Act 1976. (3+1 = 4 marks)
- 4D. Define Patent and add a note on Patent Filing Procedure. (4 marks)

5. Short Answer Questions:

- 5A. Write the objectives of Medical Termination of Pregnancy Act.
- 5B. Write the objective of the Insecticides Act and The Poisons Act 1919.
- 5C. Briefly explain employment of children, young person and women under The Bombay Shops and Establishments Act.
- 5D. Enlist the powers and functions of AICTE Act.
- 5E. Write a note on provisions relating to “Performance of Experiments on Animals” under The Prevention of Cruelty to Animals Act.

(2 marks × 5 = 10 marks)

