

MANIPAL UNIVERSITY

FOURTH YEAR B. PHARM. DEGREE EXAMINATION – APRIL/MAY 2013

SUBJECT: CLINICAL PHARMACY AND THERAPEUTICS (PPR 401)
(CREDIT BASED SYSTEM)

Monday, April 29, 2013

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ Answer ALL questions.

✍ Long essay questions:

1. Discuss the clinical manifestations and management of peptic ulcer. (3+5 = 8 marks)

2A. Explain the role of digoxin in the management of congestive heart failure.

2B. Explain the treatment of hypertension.

(3+5 = 8 marks)

3. Enumerate the complications of diabetes mellitus and explain the management of Type II diabetes mellitus.

(3+5 = 8 marks)

4. Short essay questions:

4A. Describe general prescribing guidelines for pediatrics.

4B. Explain the role of corticosteroids and beta adrenergic agonists in the management of asthma.

4C. Explain the role of poison information center.

4D. Explain the management of community acquired pneumonia.

(4×4 = 16 marks)

5. Short answer questions:

5A. Enumerate four drugs that cause acute renal failure.

5B. Outline the role of carbimazole in the management of thyroid disorder.

5C. Explain the role of MAO inhibitors in psychiatric disorders.

5D. Outline four pregnancy categories.

5E. Describe type A adverse drug reactions with a suitable example.

(2×5 = 10 marks)



MANIPAL UNIVERSITY

FOURTH YEAR B. PHARM. DEGREE EXAMINATION – APRIL/MAY 2013

SUBJECT: INSTRUMENTAL AND BIOMEDICAL ANALYSIS (PQA 402)
(CREDIT BASED SYSTEM)

Thursday, May 02, 2013

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ **Answer all questions. Draw neatly labeled diagram wherever necessary.**✍ **Long essay questions:**

1A. Name any four detectors used in HPLC. Discuss any one in brief.

1B. Write the applications of Gas chromatography.

(4+4 = 8 marks)

2. Explain the sources and detectors used in double beam UV-Visible Spectrophotometer.

(3+5 = 8 marks)

3A. What are control charts? Explain their types.

3B. Explain the conductometric titration for: a) Weak acid against strong base

b) Strong acid against strong base

(4+4 = 8 marks)

4. **Short essay questions:**

4A. i) Write the physico- chemical factors affecting fluorescence.

ii) Write the applications of atomic absorption spectroscopy.

(2+2 = 4 marks)

4B. Explain the handling of solid samples in IR spectroscopy.

(4 marks)

4C. i) Define and classify the phenomenon of light scattering.

ii) Write Bragg's equation and explain its importance.

(2+2 = 4 marks)

4D. i) List the applications of mass spectroscopy.

ii) Write interferences in atomic emission spectroscopy.

(2+2 = 4 marks)

5. **Short answer questions:**

5A. Explain the theory of NMR spectroscopy in brief.

5B. What is thermal analysis? Write any two applications of the same.

5C. Explain the brief procedure for measuring the optical activity.

5D. Define the term electrophoresis. Write any two applications of paper electrophoresis.

5E. Write the methods for detecting equivalence point in potentiometry.

(2×5 = 10 marks)



MANIPAL UNIVERSITY**FOURTH YEAR B. PHARM. DEGREE EXAMINATION – APRIL/MAY 2013****SUBJECT: INDUSTRIAL PHARMACY (PCE 403)
(CREDIT BASED SYSTEM)**

Saturday, May 04, 2013

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ **Answer ALL the questions.**

✍ **Long essay questions:**

1. Define tonicity and explain the methods to determine the tonicity.
2. Describe the manufacturing of Tablet granules by wet granulation technique.
3. Explain the quality control tests for hard gelatin capsules.

(8×3 = 24 marks)

4. **Short essay questions:**

- 4A. Mention different approaches used to increase the solubility of drugs in Liquid Orals and briefly discuss any two approaches.
- 4B. Write any four differences between Absorption base and Water soluble semisolid base.
- 4C. Mention the role of surfactants in aerosol system.
- 4D. What are the different methods of preparation of liposomes? Explain any one important method.

(4×4 = 16 marks)

5. **Short answer questions:**

- 5A. Write a brief note on importance of current Good Manufacturing Practices.
- 5B. Mention any four good qualities of a liquid shampoo.
- 5C. Write a note on abrasives used in tooth paste.
- 5D. Mention different types of plastics used in pharmaceutical packaging with examples.
- 5E. Define a Radiopharmaceutical agent. Give two examples.

(2×5 = 10 marks)



MANIPAL UNIVERSITY

FOURTH YEAR B. PHARM. DEGREE EXAMINATION – APRIL/MAY 2013

SUBJECT: MEDICINAL CHEMISTRY – II (PCH 404)
(CREDIT BASED SYSTEM)

Tuesday, May 07, 2013

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ **Answer all questions.**

✍ **Long essay questions:**

- 1A. Classify antihypertensive agents giving structures of one agent from each class. Outline the synthesis of Enalapril.
- 1B. Define diuretics with examples. Explain SAR of thiazide diuretics. Write the method of preparation of Furosemide and Ethacrynic acid.

(1+3+4 = 8 marks)

2. Classify anticancer agents giving one structure under each class. Explain the mechanism of action of DNA alkylators and outline the synthesis of Cyclophosphamide.

(4+4 = 8 marks)

3. Explain the SAR of Sulphonamides and Azoles as antifungal agents. Outline the synthesis of Sulphacetamide.

(4+2+2 = 8 marks)

4. **Short essay questions:**

- 4A. Explain the chemistry of aminoglycoside antibiotics.
- 4B. What are prodrugs? Enlist their applications with suitable examples.
- 4C. What are antianginal agents? Explain the mechanism of action of nitro vasodilators. Give the synthesis of one calcium channel blocker with its chemical name.
- 4D. Write the synthesis and uses of Benzafibrate and Warfarin sodium.

(4×4 = 16 marks)

5. **Short answer questions:**

- 5A. Write the life cycle of malarial parasite and mention the specific drugs affecting the sites.
- 5B. Explain anti-infective properties of nitro furan derivatives and oxidizing agents.
- 5C. Write the structures of Losartan, Glibenclamide, Thyroxine and Iopanoic acid.
- 5D. What are β -lactamase inhibitors? Write two structures with their uses.
- 5E. Explain the role of antitubercular drugs in the management of tuberculosis.

(2×5 = 10 marks)



MANIPAL UNIVERSITY

FOURTH YEAR B. PHARM. DEGREE EXAMINATION – APRIL/MAY 2013

SUBJECT: PHARMACOLOGY – II (PHA 405)
(MAHE SYLLABUS)

Thursday, May 09, 2013

Time: 10:00 – 13:00 Hrs.

Max. Marks: 75

✍ **Answer all questions.**

1. Define the terms—chemotherapy, bactericidal, broad-spectrum antibiotic. Classify sulphonamides with examples. Write a note on co-trimoxazole.
(3+4+3 = 10 marks)
2. Classify drugs used in the chemotherapy of malaria with examples with the help of a diagram of the life cycle of the protozoan. Describe the mechanism of action of any one antimalarial drug.
(6+4 = 10 marks)
3. Describe the general principles and treatment of acute poisoning.
(10 marks)
4. Write briefly on the pharmacokinetic properties of inhalational anaesthetics. Explain the effects of second gas effect and redistribution.
(5+5 = 10 marks)
5. **Write briefly on the following:**
 - 5A. Cisapride and mosapride
 - 5B. Diclofenac
 - 5C. Cholinergic activators as drugs for Alzheimer's disease
 - 5D. 5-Fluocytosine
 - 5E. Immunomodulators
 - 5F. Alprazolam
 - 5G. Methanol poisoning
(5×7 = 35 marks)



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FOURTH YEAR B. PHARM. DEGREE EXAMINATION – APRIL/MAY 2013

SUBJECT: PHARMACOGNOSY – III (PCO 406)
(CREDIT BASED SYSTEM)

Saturday, May 11, 2013

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

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

✍ Long essay questions:

1A. Describe the Life Cycle of Ergot.

1B. Explain the method of cultivation, collection and preparation of Opium.

(4+4 = 8 marks)

2A. What are Pyrethrins? Explain their role as insecticides.

2B. Enlist the different types of enzyme reactors. Compare and contrast between Stirred tank reactor and Fluidized bed reactor.

(4+4 = 8 marks)

3. Give the source and structure of Andrographolide. Explain its method of isolation, estimation and tests for identification.

(8 marks)

4. Short essay questions:

4A. Discuss the principles of Traditional Chinese Medicine.

4B. Give an account of diagnosis of Allergy.

4C. Define Tinctures. Give the method of preparation of Tincture Opium.

4D. Classify various types of Plant Tissue Cultures and write a brief note on meristem culture.

(4×4 = 16 marks)

5. Short answer questions:

5A. Vitali-Morin's test

5B. Importance of herbal medicine

5C. Herbal Antioxidants

5D. Structure and uses of Niphatesine-D and Cephalosporin C

5E. Source, active constituents and use of Gentian and Quassia

(2×5 = 10 marks)



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FOURTH YEAR B. PHARM. DEGREE EXAMINATION – APRIL/MAY 2013

**SUBJECT: PHARMACEUTICAL MANAGEMENT (PMA 407)
(MAHE SYLLABUS)**

Tuesday, May 14, 2013

Time: 10:00 – 13:00 Hrs.

Max. Marks: 75

1. Answer the following questions:

- 1A. Enlist managerial roles identified by Mintzberg.
- 1B. Distinguish between ledger and journal.
- 1C. Write a note on Differentiated Marketing.
- 1D. What are the criteria for selecting a medical representative?
- 1E. What does a training program by a company generally involve after selecting medical representative?
- 1F. Explain in brief procedures laid down for exporting and importing goods.
- 1G. Define Economics and enlist Economic and Non Economic activities.

(5×7 = 35 marks)

2. Answer the following:

- 2A. Enlist the theories on leadership behavior and styles. Explain managerial grid theory.
- 2B. Enlist various contents of a balance sheet and describe current assets.
- 2C. Discuss the various members of pharmaceutical distribution channel and explain the functions of a super distributor.
- 2D. Explain inventory management with the help of various inventory control models.

(10×4 = 40 marks)

