

MANIPAL UNIVERSITY**SECOND YEAR PHARM D. DEGREE EXAMINATION – MAY 2011****SUBJECT: PD 2.1: PATHOPHYSIOLOGY**

Tuesday, May 03, 2011

Time: 10:00 – 13:00 Hrs.

Max. Marks: 70

✍ **Answer ALL the questions.**

✍ **Long Essays:**

1. Discuss the etiology and metastasis of malignant tumors. (10 marks)
2. Explain the causes and pathogenesis of reversible and irreversible cell injury. (10 marks)
3. Explain the pathogenesis of HIV infection. Enumerate various clinical signs and symptom of HIV infection. (7+3 = 10 marks)

4. Short Essays:

- 4A. Discuss the differences between type I and type II diabetes mellitus.
- 4B. Explain the etiology and pathogenesis of malaria.
- 4C. Describe the pathogenesis of starvation.
- 4D. Explain type I hypersensitivity reaction with suitable examples.
- 4E. Explain the pathogenesis of acute inflammation.
- 4F. Describe the pathogenesis of myocardial infarction and enlist various ECG changes in MI. (5×6 = 30 marks)

5. Short Answers:

- 5A. List out four differences between asthma and COPD.
- 5B. Enumerate two causative organisms for pneumonia and tuberculosis.
- 5C. Enumerate various risk factors of ischemic stroke.
- 5D. Explain Mc-Ardle's disease.
- 5E. Enumerate deficiency symptoms of vitamin D. (2×5 = 10 marks)



MANIPAL UNIVERSITY

SECOND YEAR PHARM D. DEGREE EXAMINATION – MAY 2011

SUBJECT: PD 2.2: PHARMACEUTICAL MICROBIOLOGY

Thursday, May 05, 2011

Time: 10:00 – 13:00 Hrs.

Max. Marks: 70

✍ Answer ALL the questions.

✍ Long Essays:

1. Discuss normal bacterial growth curve and mention the methods of maintaining synchronous growth.
2. Discuss sterilization by filtration with regard to theories behind mechanism of filtration and test for measuring the efficiency of filters.
3. Enlist the different types of bacterial antigens and explain the antigen-antibody reaction in detail.

(10×3 = 30 marks)

4. Short Essays:

- 4A. Compare and contrast morphological features of genera *Penicillium* and *Aspergillus*.
- 4B. Define pure culture and enlist the methods of isolation. Explain any one method of isolation.
- 4C. Explain the merits of Chick Martin coefficient over Rideal Walker coefficient and write the procedure for determining C.M.C.
- 4D. Write the procedure of Western blot technique.
- 4E. Write the procedure of one level factorial assay of antibiotics.
- 4F. Write the causative microorganism, mode of transmission, important symptoms and treatment of typhoid.

(5×6 = 30 marks)

5. Short Answers:

- 5A. Name any two scientists and their major contribution to the field of microbiology.
- 5B. Mention the different types of flagellar arrangements for bacteria with one example each.
- 5C. Fungi can be cultivated in nutrient broth but not in fluid thioglycollate broth. Why? Suggest a specific medium for cultivation of fungi.
- 5D. Give the complete classification of methods for quantitative measurement of bacterial growth.
- 5E. Mention the causative microorganism and route of infection for tuberculosis and cholera.

(2×5 = 10 marks)



MANIPAL UNIVERSITY

SECOND YEAR PHARM D. DEGREE EXAMINATION – MAY 2011

SUBJECT: PD 2.3: PHARMACOGNOSY AND PHYTOPHARMACEUTICALS

Saturday, May 07, 2011

Time: 10:00 – 13:00 Hrs.

Max. Marks: 70

✍ Answer ALL questions.

✍ Draw structures and diagrams wherever necessary.

✍ Long Essays:

1. Intrinsic and Extrinsic factors affecting cultivation of crude drugs.

2. Living and non-living cell inclusions and types of stomata.

3. Definition, classification and chemical test for the identification of Carbohydrates.

(10×3 = 30 marks)

4. Short Essays:

4A. Various methods of classification of crude drugs and give detailed account of Chemotaxonomy.

4B. Cultivation, collection and preparation of Senna.

4C. Definition, classification and extraction of fixed oils and fats.

4D. Classification and Chemistry of proteins.

4E. Source, constituents and uses of Guar gum, Linseed.

4F. Microscopy (T.S. & Powder) of Ginger.

(5×6 = 30 marks)

5. Short Answers:

5A. Definition and history of Pharmacognosy.

5B. Natural Pesticides.

5C. Definition and classification of Alkaloids.

5D. Plant fibres of carbohydrate origin.

5E. Definition and types of Adulteration.

(2×5 = 10 marks)



MANIPAL UNIVERSITY

SECOND YEAR PHARM D. DEGREE EXAMINATION – MAY 2011

SUBJECT: PD 2.4: PHARMACOLOGY – I

Tuesday, May 10, 2011

Time: 10:00 – 13:00 Hrs.

Max. Marks: 70

✍ **Answer all the questions.**

✍ **Long Essays:**

1. Describe the Glucocorticoid actions of steroid hormones. List out the differences between hydrocortisone and prednisolone.

(8+2 = 10 marks)

2. Discuss the mechanisms of action of NSAIDs leading to:

2A. The suppression of pain, inflammation, and fever

2B. Gastric mucosal damage

2C. Renal impairment

(6+2+2 = 10 marks)

3. Classify the drugs used in hyperlipidemias. With a neat illustration explain the mechanisms of action of different classes of hypolipidemic drugs.

(10 marks)

4. **Short Essays:**

4A. Mechanisms of action of antiepileptic drugs acting through GABAergic system.

4B. Explain any five therapeutic uses of atropine substitutes with examples.

4C. Pharmacological actions of alpha-blockers.

4D. With a neat picture explain the steady state level concept and its applications.

4E. Mechanisms of drug action through enzyme-linked receptors.

4F. Discuss with examples how liver disease modifies the drug action.

(5×6 = 30 marks)

5. **Short Answers:**

5A. Why is salmeterol used in bronchial asthma?

5B. Any four advantages of atypical antipsychotics over the conventional antipsychotics.

5C. What is 4-methylpyrazole? Explain its mechanism and application.

5D. The last dose of organic nitrates are administered before 6.00 PM in chronic administration. Explain Why?

5E. How is timolol useful in glaucoma?

(2×5 = 10 marks)



MANIPAL UNIVERSITY**SECOND YEAR PHARM D. DEGREE EXAMINATION – MAY 2011****SUBJECT: PD 2.5: COMMUNITY PHARMACY**

Thursday, May 12, 2011

Time: 10:00 – 13:00 Hrs.

Max. Marks: 70

Long Essay:

- 1A. Discuss the schedule N requirements for a community pharmacy.
- 1B. Explain the role of computers in community pharmacy.

(5+5 = 10 marks)

2. Enumerate the various methods of inventory control employed in a community pharmacy and explain any three.

(10 marks)

3. Define over the counter medicines. Explain the role of pharmacist during the dispensing of over the counter medicines.

(10 marks)

4. Short Essays:

- 4A. Enumerate various barriers in patient counseling and strategies to overcome the same.
- 4B. Explain the various methods of intrauterine contraception.
- 4C. Explain the code of ethics for pharmacists in relation to his profession and trade.
- 4D. Define prescription and explain the parts of a prescription.
- 4E. Explain the criteria for selection of site to start a community pharmacy.
- 4F. Define and explain the principles of pharmaceutical care.

(5×6 = 30 marks)

5. Short Answers:

- 5A. List the various registers and records to be maintained in a community pharmacy.
- 5B. Explain the role of community pharmacists in health screening services.
- 5C. Enumerate various factors affecting medication adherence.
- 5D. List the advantages of essential drug concept.
- 5E. Explain the role of pharmacist in prevention of malaria.

(2×5 = 10 marks)



MANIPAL UNIVERSITY
SECOND YEAR PHARM D. DEGREE EXAMINATION – MAY 2011
SUBJECT: PD 2.6: PHARMACOTHERAPEUTICS – I

Saturday, May 14, 2011

Time: 10:00 – 13:00 Hrs.

Max. Marks: 70

✍ **Answer ALL the questions.**

✍ **Long Essays:**

1. Discuss the pharmacotherapy of congestive heart failure. (10 marks)

2A. Explain the management of chronic asthma of stage III.

2B. Explain the lung volumes with a suitable illustration. Differentiate asthma and Chronic obstructive pulmonary disease using pulmonary function test.

(5+5 = 10 marks)

3A. Describe the various dosage regimens and adverse effects of insulin.

3B. Enumerate the complications of diabetes mellitus and explain the management of any two.

(5+5 = 10 marks)

4. **Short Essays.**

4A. Explain the drugs used in the treatment of primary open angle glaucoma.

4B. Explain the role of pharmacist in rational drug prescribing.

4C. Explain the etio-pathogenesis of hyperlipidemia.

4D. Explain the management of osteoporosis.

4E. Explain the management of hypertension in pregnancy and lactation.

4F. Explain briefly the management of thyrotoxicosis.

(5×6 = 30 marks)

5. **Short Answers:**

5A. Classify angina pectoris.

5B. Enumerate four cardiac function tests with their normal values.

5C. Explain the role of aspirin and clopidogrel in MI.

5D. Explain any one mechanism involved in drug induced air flow obstruction.

5E. Enumerate the common organisms that cause conjunctivitis.

(2×5 = 10 marks)

