MANIPAL UNIVERSITY

SECOND YEAR PHARM D. DEGREE EXAMINATION – APRIL/MAY 2012

SUBJECT: PD 2.1: PATHOPHYSIOLOGY

Monday, April 30, 2012

Time: 10:00 – 13:00 Hrs.   Max. Marks: 70

✍   **Answer ALL the questions.**

✍   **Long Essay Questions:**

1.   Define Congestive heart failure and explain its pathophysiology.

2.   With the help of a diagram explain the steps involved in the mobilization of cell-mediated and humoral immunity.

3.   Classify chronic renal failure (CRF) based on GFR, enumerate the complications, signs and symptoms of CRF.

                                                                        (10×3 = 30 marks)

4.   **Short Essay Questions:**

4A.   Discuss the events of wound healing by second intention.

4B.   Discuss the neural regulation of blood pressure.

4C.   What are the signs and symptoms and complications of tuberculosis?

4D.   Discuss the dopamine theory of pathogenesis of schizophrenia.

4E.   What are the different types MHC-antigens (or HLA antigens); enlist their role in immune reactions?

4F.   Discuss the cellular events of acute inflammation.

                                                                        (5×6 = 30 marks)

5.   **Short Answer Questions:**

5A.   Enlist the pre-renal factors for the development of acute renal failure.

5B.   Classify tumors based on histogenesis (cell of origin).

5C.   Enlist the signs and symptoms of amoebiasis.

5D.   Enumerate four organisms involved in community and hospital acquired pneumonia.

5E.   Mention four signs of Parkinsonism.

                                                                        (2×5 = 10 marks)

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SECOND YEAR PHARM D. DEGREE EXAMINATION – APRIL/MAY 2012

SUBJECT: PD 2.2: PHARMACEUTICAL MICROBIOLOGY

Thursday, May 03, 2012

Time: 10:00 – 13:00 Hrs.   Max. Marks: 70

✍ **Answer ALL the questions.**

✍ **Long Essays:**

1. Define bacterial growth. Enlist the methods of quantitative measurement of growth and discuss viable count.

2. Draw a neat labeled diagram of "portable sterilizer" and discuss its design and operation.

3. Define and classify immunity. Discuss acquired immunity in detail with examples.

(10×3 = 30 marks)

4. **Short Essays.**

4A. Describe a typical bacteriophage structure with diagram.
4B. Define culture medium and enlist different culture media with specific applications.
4C. Explain the tube dilution method and gradient plate technique for evaluating bacteriostatic activity of disinfectants.
4D. What is Q.B.C? Write the principle of Q.B.C.
4E. Briefly outline the procedure for microbiological assay of Vitamin B_{12}.
4F. Write the causative microorganism, mode of transmission, important symptoms and treatment of tuberculosis.

(5×6 = 30 marks)

5. **Short Answers:**

5A. Define Resolving power of a microscope and mention the methods to increase it.
5B. Differentiate between the cell walls of Gram positive and Gram negative bacteria.
5C. Fungi can be cultivated in nutrient broth but not in fluid thioglycollate broth. Why? Suggest a specific medium for cultivation of fungi.
5D. *E.coli* and *Staphylococcus aureus* can be differentiated by simple staining but *E.coli* and *Bacillus subtilis* cannot be differentiated. Why? How can they be differentiated?
5E. Give one example each for water borne diseases and STD and mention the treatment module.

(2×5 = 10 marks)

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SECOND YEAR PHARM D. DEGREE EXAMINATION – APRIL/MAY 2012

SUBJECT: PD 2.4: PHARMACOLOGY – I

Tuesday, May 08, 2012

Time: 10:00 – 13:00 Hrs.   Max. Marks: 70

✍ **Answer all the questions.**

✍ **Draw the neat, labeled diagram wherever necessary.**

✍ **Long Essays:**

1. List the factors that modify drug actions. Explain with examples any four factors that modify the drug action.

$$(2+8 = 10 \text{ marks})$$

2. Classify sedative- hypnotics with examples. Discuss the pharmacological actions, uses and adverse effects of barbiturates.

$$(4+3+3 = 10 \text{ marks})$$

3. Classify oral hypoglycaemic drugs with examples. Describe the mechanism of action of sulfonylureas. Give its side effects.

$$(4+4+2 = 10 \text{ marks})$$

4. **Short Essays:**

4A. Mechanism of action of drugs in Myasthenia gravis.

4B. Mechanism of action of Isosorbide dinitrate.

4C. Mechanism of action of Drugs for the treatment of glaucoma.

4D. Mechanism of action of Ethyl alcohol.

4E. Metabolic pathways of levodopa and drugs affecting it.

4F. Mechanism of action of Oxytocin.

$$(5 \times 6 = 30 \text{ marks})$$

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

5A. Sublingual tablets of nitroglycerin are preferred over other routes in acute angina.

5B. Combination of diuretics and digoxin for CHF treatment.

5C. Oropharyngeal candidiasis is a common side effect seen during COPD treatment.

5D. Despite its longer $t_{1/2}$, the action of thiopentone lasts only for a few minutes.

5E. Ergotamine is combined with caffeine for migraine therapy.

$$(2 \times 5 = 10 \text{ marks})$$

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SECOND YEAR PHARM D. DEGREE EXAMINATION – APRIL/MAY 2012

SUBJECT: PD 2.5: COMMUNITY PHARMACY

Thursday, May 10, 2012

Time: 10:00 – 13:00 Hrs.   Max. Marks: 70

✍ **Answer ALL the questions.**

✍ **Long Essay Questions:**

1A. Discuss the role of community pharmacist in family planning.

1B. Discuss briefly on Pharmaceutical care.

(5+5 = 10 marks)

2. What is patient medication counseling? Describe the various steps involved in patient medication counseling.

(10 marks)

3. Explain the code of ethics for the pharmacists in relation to his trade and profession.

(10 marks)

4. **Short Essay Questions:**

4A. Explain ABC and VED analysis.

4B. Explain the various parts of a prescription with the help of a model prescription.

4C. Explain the clinical presentation and prevention of malaria and tuberculosis.

4D. Explain essential drugs concept with its advantages.

4E. Discuss the use of computers in community pharmacy.

4F. Explain the layout design of community pharmacy.

(5×6 = 30 marks)

5. **Short Answer Questions:**

5A. Define inventory and lead time.

5B. Name any four communicable diseases and its causative organism.

5C. Mention the drug therapy for nausea and vomiting.

5D. Give the importance of health screening testing.

5E. What is the importance of patient information leaflets?

(2×5 = 10 marks)

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SECOND YEAR PHARM D. DEGREE EXAMINATION – APRIL/MAY 2012

SUBJECT: PD 2.6: PHARMACOTHERAPEUTICS – I

Saturday, May 12, 2012

Time: 10:00 – 13:00 Hrs.   Max. Marks: 70

✍ **Answer all questions.**

✍ **Long Essay:**

1A. Explain the role of biguanides, sulfonyl ureas and alpha gluocosidase inhibitors in the management of type 2 diabetes mellitus.

1B. Enumerate the various insulin preparations and write the steps involved in usage of Insulin.

(6+4 = 10 marks)

2. Explain the management of acute severe asthma.

(10 marks)

3A. Define hypertension. Write the algorithm of treatment of hypertension with compelling indication according the JNC VII guidelines.

3B. What is heart failure and explain the role of ACE inhibitors and Beta Blockers in the management of heart failure?

(5+5 = 10 marks)

4. **Short Essay:**

4A. What is myxedema and explain the management of the same.

4B. Enumerate the factors that contribute irrational use of drugs.

4C. Write the etiology of primary dyslipidemia.

4D. Explain the therapeutic role of Bisphosphonates and Selective Estrogen Receptor Modifiers in Osteoporosis.

4E. Explain the management for primary angle closure glaucoma.

4F. Explain briefly the prescribing guidelines for geriatrics.

(5×6 = 30 marks)

5. **Short Answers:**

5A. Write a note on pink puffers and blue bloaters.

5B. Write the pharmacological role and adverse effects of Class II antiarrhythmics.

5C. Enlist the drugs that affect the lung parenchyma.

5D. Enlist the drugs that are indicated for diabetes and hypertension with respect to pregnancy.

5E. Write the dosage of levothyroxine in pediatrics and in elderly patients.

(2×5 = 10 marks)

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