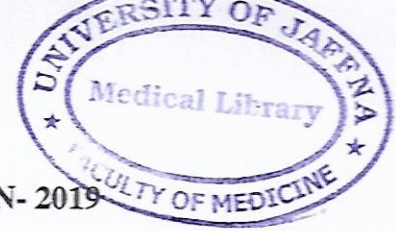


UNIVERSITY OF JAFFNA, SRI LANKA
BACHELOR OF PHARMACY
FOURTH YEAR FIRST SEMESTER EXAMINATION- 2019
PHACP 4132 CLINICAL PHARMACY



Date: 19/02/2021

Time: 02 Hours

Answer All SIX Questions.

Answer Part A, Part B in separate answer book

PART A

1.
 - 1.1 List the functions of clinical pharmacist. (20 Marks)
 - 1.2 What are the steps involved in medication history interview? (20 Marks)
 - 1.3 Explain the process involved in counselling of the patient at discharge by the pharmacist. (60 Marks)
2.
 - 2.1 Briefly explain why therapeutic drug monitoring is necessary for the patient prescribed phenytoin? (30 Marks)
 - 2.2 Write down the information needed for the interpretation of the results of drug analysis in therapeutic drug monitoring. (30 Marks)
 - 2.3 Discuss how drug response differs greatly between individuals based on pharmacokinetic aspects? (40 Marks)

3. Single IV dose of an antibiotic was given to a 50 kg woman at a dose of 20 mg/kg. Urine and blood samples were collected periodically and assayed for parent drug. Following data were obtained assuming the system as one compartment model.

Drug concentration (mg/mL)	Time (min)
0.25	4.2
0.5	3.5
1	2.5
2	1.25
4	0.31
6	0.08

- 3.1 Determine the order of the elimination? (40 Marks)
- 3.2 Calculate the following pharmacokinetic parameters.
 - 3.2.1 Volume of distribution (Vd) (20 Marks)
 - 3.2.2 Rate constant (k) (20 Marks)
 - 3.2.3 Half life (20 Marks)

- 4.
- 4.1 Define following terms. **(40 Marks)**
- 4.1.1 Adherence
- 4.1.2 Adverse drug reaction
- 4.1.3 Substance abuse
- 4.1.4 Evidence based medication
- 4.2 Explain the factors that affect adherence. **(60 Marks)**

PART B

- 5
- A 72-year-old man presents to the clinic for routine follow-up. He is under treatment for hypertension and CHF with enalapril and hydrochlorothiazide. His blood pressure is under control and he has no symptoms of heart failure at present. He complains that he has been coughing frequently in the past few months. History and examination reveal no other cause of a chronic cough. Physician recommend to discontinue enalapril and prescribed losartan and also recommending to monitor patients' serum potassium levels.
- 5.1 Briefly discuss the mechanism of action of enalapril and losartan. **(40 Marks)**
- 5.2 List the advantages of losartan over enalapril. **(10 Marks)**
- 5.3 Explain the reason for switching from enalapril to losartan. **(30 Marks)**
- 5.4 Explain why physician recommends to monitor serum potassium level. **(20 Marks)**

- 6
- BV is a 65-year-old man with atrial fibrillation. He has been using warfarin for the past 12 months after he presented to the local emergency department with signs of transient ischemic attack (TIA).

Past Medical History: hypertension and osteoarthritis
 Past Surgical History: left total hip replacement 6 months ago

Drug History : atenolol 50 mg once daily
 ramipril 10 mg once daily
 celecoxib 100mg twice daily
 warfarin 6 mg at night
 amiodarone 100 mg daily (Newly prescribed)

Social History : Started to use alcohol recently after loss of his son

On examination : *Vital signs-* BP 140/80 mmHg;
pulse rate 65, irregular
Other physical examinations-
normal with no evidence of
bruising, epistaxis or
gastrointestinal bleeding.

Investigations : A head CT scan and trans-
esophageal echocardiogram were
normal
International Normalized Ratio
(INR) taken this morning was 4.6.
Previously his INR results (which
have been measured every 2
weeks) have been in the range of
2.0-3.0.

- 6.1 Briefly explain the factors that commonly affect the INR results. (20 Marks)
- 6.2 6.2.1. Describe the potential causes which can increase the INR in the patient BV. (30 Marks)
- 6.2.2. Describe how above mentioned causes in 6.2.1 could be managed in the patient BV. (20 Marks)
- 6.3 Briefly discuss the effect of vitamin K in this patient. (30 Marks)