



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

Date: ~~PHACP 4132~~ 5/11/2019

Time: 02 Hours

1.
  - 1.1 What are the resources needed to establish Drug Information Centre (DIC)? (30 marks)
  - 1.2 Explain the functions of the DIC. (70 marks)
  
2.
  - 2.1 Define Adverse Drug Reaction (ADR). (10 marks)
  - 2.2 List and explain intrinsic factors that affect the occurrence of ADR. (60 marks)
  - 2.3 Define 'Substance abuse'. (10 marks)
  - 2.4 Write down the indication, mode of action, dose and adverse effects of methadone. (20 marks)
  
3.
  - 3.1 What is therapeutic drug monitoring (TDM)? (10 marks)
  - 3.2 A 24 year old female patient is admitted to the hospital due to uncontrolled seizures. Despite repeated lorazepam injections, the physician prescribed phenytoin injection for the patient and requested the clinical pharmacist for TDM.
    - 3.2.1 List three (03) reasons for requesting plasma drug concentration. (30 marks)
    - 3.2.2 Explain the timing of blood sampling of phenytoin. (40 marks)
    - 3.2.3 What are the other information that are needed for the interpretation of the results of TDM? (20 marks)

- 4.
- 4.1 List five (05) applications of pharmacokinetic studies. (20 marks)
- 4.2 Phenytoin sodium has bioavailability factor of 0.9 and volume of distribution of 0.7 L/kg. Its plasma drug concentration was 10 mg/L. Calculate the effective dose of phenytoin sodium. (Phenytoin sodium consists of 92% phenytoin and 8% sodium). (30 marks)
- 4.3 Drug 'A' with concentration of 300 mg/ml was injected to a patient. After 30 hours the plasma drug concentration was 75 mg/ml.
- 4.3.1 If drug 'A' follows first order kinetics, calculate the time needed when the drug decline to one half the initial concentration. (25 marks)
- 4.3.2 If drug 'A' follows zero order kinetic, calculate the time needed when the drug decline to one half the initial concentration. (25 marks)
05. According to the patient information given below, as a clinical pharmacist, review all the information and answer the questions which are given below.
- Patients' Details - Mrs. WL, 70 years old
  - Chief Complaints
    - Feeling very tired
    - Getting out of breath when walking upstairs
  - Past Medical History (H<sub>x</sub>) - NIL
  - Social H<sub>x</sub> - Strict Vegetarian
  - Laboratory Investigations (I<sub>x</sub>) - FBC
  - Result of the I<sub>x</sub> - Iron deficiency anaemia
- 5.1 What is anaemia? (05 Marks)
- 5.2 What typical blood results might you expect in a patient with iron-deficiency anaemia? (10 Marks)
- 5.3 What symptoms does Mrs WL have that support the diagnosis of iron-deficiency anaemia? (10 Marks)
- 5.4 What risk factors does Mrs WL have for developing this condition? (15 Marks)
- 5.5 Should modified-release iron preparations be used in the treatment of anaemia? Justify your answer. (15 Marks)
- 5.6 What are the side-effects of iron preparations? (10 Marks)

- 5.7 What medication would you recommend for Mrs WL? (Give a (10 Marks) preparation, dose and frequency.)
- 5.8 How would you counsel Mrs WL about the medication you have (15 Marks) recommended?
- 5.9 Mrs WL tells you that she takes magnesium trisilicate for her indigestion (10 Marks) when you ask about any other medicines. Can she continue to take this?

06. A patient suffering from epilepsy is on Carbamazepine. Concomitantly, she also takes Erythromycin, Warfarin, Ciclosporin for several other disease conditions, and Oral contraceptives as OTC. It is your duty as a clinical pharmacist to review all the interactions and answer the questions below in the enquiry format.

- 6.1 Find out the drug-drug interactions and mention the clinical consequences (50 Marks) of it
- 6.2 What are the precautions need to be taken while prescribing the above (50 Marks) drugs concomitantly?