

FIFTH YEAR PHARM. D : SUMMER - 2018
SUBJECT: CLINICAL PHARMACOKINETICS AND PHARMACOTHERAPEUTIC
DRUG MONITORING

Day : **Tuesday**
Date : **10/04/2018**

S-2018-4047

Time : **10.00 AM to 01.00 PM**
Max. Marks : **70**

N. B. :

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Out of remaining **Any TWO** questions from **Section - I** and **Any TWO** questions from **Section - II.**
- 2) Both the sections should be written in the **SEPARATE** answer book.
- 3) Figures to the right indicate **FULL** marks.

SECTION - I

- Q.1 a)** Answer **Any FOUR** of the following : **(08)**
- i) Name two hepatic enzyme inducers.
 - ii) Give examples of drug for which TDM is not required.
 - iii) Give formula for calculation of pediatric doses.
 - iv) Define clinical pharmacokinetics.
 - v) Define volume of distribution.
 - vi) What is therapeutic index?
- b)** Describe pharmacokinetic drug interactions with examples. **(03)**
- Q.2** Define therapeutic drug monitoring (TDM). Explain the indications and applications of TDM in details. **(12)**
- Q.3 a)** Describe the intravenous to oral dosing conversion. **(07)**
- b)** Describe the inhibition of biliary excretion and its effect on pharmacokinetics. **(05)**
- Q.4** Write short notes on **Any THREE** of the following : **(12)**
- a) TDM of lithium
 - b) Methotrexate
 - c) Nomograms
 - d) Drug dosing in obese patients

P.T.O.

SECTION - II

- Q.5 A)** Answer **Any FOUR** of the following : **(08)**
- i)** How do you adjust dose of a drug in a renal impairment with a constant dosing interval.
 - ii)** Calculate creatinine clearance in an 85 year old female weighing 190 Ibs, with serum creatinine concentration of 1.5 mg/100ml.
 - iii)** Give examples of hepatic makers and their importance.
 - iv)** Define genetic polymorphism and give examples.
 - v)** Define pharmacogenetics.
 - vi)** Explain the intrinsic clearance of drug.
- B)** Describe genetic polymorphism in CYP2D6. **(03)**
- Q.6** What is population pharmacokinetic data? Explain in detail the methods adopted in analysis of such data. **(12)**
- Q.7 a)** What is Bayesian theory? Explain with suitable example. **(07)**
- b)** What is extracorporeal removal of drugs? Explain. **(05)**
- Q.8** Write short notes on **Any THREE** of the following : **(12)**
- a)** Effect of hepatic diseases on pharmacokinetics
 - b)** Role of genetic polymorphism in drug metabolism
 - c)** Effect of renal and hepatic diseases on protein binding
 - d)** Methods of determining creatinine clearance in adults

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