D-1582
M. Sc. (Sem. IV) (Pharmaceutical Chemistry)
Examination
April / May - 2016
Paper - III : Drug Metabolism, Pharmacokinetics
& Pharmacognosy

Time : 3 Hours] [Total Marks : 70

Instructions :
(1) Fill up strictly the details of signs on your answer book.

(2) Figures to the right indicate full marks of the questions.

1 Explain any three of the following : 18
   (a) What is molecular modelling method ? Based on molecular mechanics approach, discuss their stick and space fill models with applications.
   (b) Explain tagging method for structural determination of the active compounds.
   (c) Giving example discuss solid phase technique used in combinatorial system.
   (d) What is molecular mechanics ? Give an account on the relation between bioinformatics and computer aided drug design.

2 Answer any three of the following : 18
   (a) What is pharmacokinetics ? Giving schematic diagram explain the therapeutic value of the drug.
   (b) What is clearance (CL) ? Discuss its application for studying the pharmacokinetic behaviour in drug design.
   (c) What is bioavailability ? Discuss relationship between relative and absolute availability in pharmacokinetic behaviour of drug.
(d) Explain in brief: Intravascular and extravascular administration in context to pharmacokinetics.

3 Answer any three of the following:
   (a) Giving examples classify and discuss various system of drug of their origin in nature.
   (b) Give an account on the important constituents present in Pterocarpus and Gymnema sylvestris as antidiabetic agent.
   (c) Write a note on Rauwolfia as antihypertensive drug.
   (d) Discuss therapeutic efficacy of Cardamom, Ginger and Black pepper as carminatives and GI regulators.

4 Answer any three of the following:
   (a) Explain giving diagram parallel method for screening of active member of library.
   (b) What is ADMET? Giving example discuss its significance in drug design.
   (c) Explain in short: Computer Graphics and parallel synthesis.
   (d) Give a brief account on Aswagandha and Opium used on nervous system.