PARANA – II (2012 COURSE) (CBCS): SUMMER – 2016
SUBJECT : ADVANCED PHARMACEUTICAL CHEMISTRY – III

Day : Tuesday
Date : 05-07-2016

Time : 10:00AM TO 1:00 P.M.
Max. Marks : 60

N.B.:

1) Attempt any **THREE** questions from Section I & any **THREE** questions from Section – II.
2) Figures to the right indicate **FULL** marks.
3) Answers to both the sections should be written in the **SEPARATE** answer books.

SECTION – I

Q.1 Discuss the chemistry of peptides and proteins with special reference to stereochemical and conformational features of peptides and proteins. **[10]**

Q.2 What are chiral drugs? Give examples. Give methods of asymmetric synthesis for any two drugs. **[10]**

Q.3 What are linkers? Discuss the type of linkers used in the encoded combinatiorial synthesis. **[10]**

Q.4 Write short notes on **ANY TWO** of the following: **[10]**

a) Enantio-selective synthesis with any one example

b) Somatostatin and Relaxin

c) High throughput screening

SECTION – II

Q.5 Classify antiretroviral drugs giving one representative structure for each class. Add a brief note on their mode of action. **[10]**

Q.6 What is hyperlipidemia? Give classification, chemistry and MOA of lipid lowering agents. Give the synthesis of any one drug describing reaction condition, mechanism and strategies involved in the synthesis. **[10]**

Q.7 Explain in detail conformational analysis. **[10]**

Q.8 Write notes on **ANY TWO** of the following: **[10]**

a) Molecular modeling and application in drug discovery

b) DPP – IV inhibitors as antidiabetic agents

c) Drugs used in Alzheimers.

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PARANA – II (CBCS) (2012 COURSE) : SUMMER – 2016
SUBJECT : ADVANCED PHARMACEUTICAL CHEMISTRY – II

Day : Saturday
Date : 02-07-2016

Time : 10:00 AM TO 1:00 P.M.
Max. Marks : 60

N. B. :

1) Attempt **ANY THREE** questions from Section – **I** and attempt **ANY THREE** questions from Section – **II**.
2) Figures to the right indicate **FULL** marks.
3) Answers to both the sections should be written in the **SEPARATE** answer books.

SECTION - I

Q. 1 **a)** Discuss how enzymes can be useful as potential targets for discovery of drugs citing examples. **(04)**

b) Give an exhaustive account of cyclooxygenase and lipooxygeanase inhibitors. **(06)**

Q. 2 Differentiate between : **(10)**

i) Hard and soft drugs
ii) Carrier- linked and bioprecursor prodrugs
iii) Twin drugs and mutual prodrugs
iv) Ad-hoc and post-hoc design

Q. 3 **a)** How active and passive targeting can be achieved by macromolecular prodrugs. **(05)**

b) Which macromolecular carriers you will use for targeting drugs to colon? Why? Explain their structures and prodrug design for the same. **(05)**

Q. 4 Write short notes on **ANY TWO** of the following: **(10)**

a) DNA binding and nicking agents
b) DNA intercalating agent
c) Transition state analogs

SECTION - II

Q. 5 What are the various ligand based approaches of molecular modeling. Give details of molecular mechanics and force field methods. **(10)**

Q. 6 What are the various tools and techniques of QSAR? Elaborate on free Wilson approach. **(10)**

Q. 7 Which are the various hit optimization strategies? Give details of various application rules of QSAR. **(10)**

Q. 8 Write short notes on **ANY TWO** of the following: **(10)**

a) Functional group interconversion