PARANA-I (CBCS): ? WINTER 2016

SUBJECT: ADVANCED PHARMACEUTICAL CHEMISTRY-I
(PHARMACEUTICAL CHEMISTRY)

Day: Friday
Date: 06-01-2017

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

N: B:

1) Attempt **ANY THREE** questions from Section-**I** and **ANY THREE** questions from Section-**II.**
2) Answers to both the sections should be written in the **SEPARATE** answer books
3) Give reactions, structures, schemes **WHEREVER** necessary.
4) Figures to the right indicate **FULL** marks.

SECTION-I

Q.1 Elaborate on various methods for the protection and deprotection of $-NH_2$ group and – OH groups. **(10)**

Q.2 Explain general principle of catalysis. Discuss with examples catalysis by enzymes and base catalysis. **(10)**

Q.3 Explain the principle, mechanism and applications of **(10)**
a) Benzil benzillic acid rearrangement
b) Wolf kishner reduction

Q.4 Write short notes on (**ANY TWO**) **(10)**
a) Nucleophillic and non-nucleophic bases
b) Preparation of trifluoromethyl ethers
c) MPV reduction

SECTION-II

Q.5 Discuss different methods to synthesize α – methylene lactones. **(10)**

Q.6 Discuss in detail cycloaddition reaction with suitable examples. **(10)**

Q.7 Explain in detail chemistry of **any two** of the following named reactions. **(10)**
i) Claisen isoxazole synthesis
ii) Fischer indole synthesis
iii) Paal knorr pyrole synthesis

Q.8 Short notes (**ANY TWO**) **(10)**

a) Stereochemistry of allenes & biphenyls
b) Woodward rules for allowed & disallowed motions
c) Reactions of active methylene compounds

* * * * *

PARANA – II (CBCS): WINTER - 2016

SUBJECT : ADVANCED PHARMACEUTICAL CHEMISTRY – III

Day : Thursday
Date : 05-01-2017

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 stability of proteins and peptides. Add a note on DNAse Interferon. **[10]**

Q.2 Discuss the synthesis, mechanism and stereochemistry of **any two** of the following drugs: **[10]**

a) Fexofenadine **b)** Clitirzine **c)** Ciprofloxacin.

Q.3 Explain how chiral Pool and chiral auxillaries are used for asymmetric synthesis. **[10]**

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

a) Solid supports

b) Linkers and their applications

c) Parallel solution synthesis

SECTION – II

Q.5 **a)** Elaborate upon life cycle of HIV highlighting the targets for anti HIV drug development. **[05]**

b) Explain the mechanism of brain cell death. What are the four FDA approved anti alzheimer agents? **[05]**

Q.6 Explain the pathophysiology of Diabetes and various drugs used in the treatment of Diabetes. **[10]**

Q.7 Explain various methods of energy minimization. **[10]**

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

a) DNA alkyalting agents

b) Statins

c) Molecular modeling and its application in drug discovery

* * * *