Pre. Ph.D. Course Work (2017 Course) : SUMMER - 2018
(Pharmaceutical Chemistry)
SUBJECT : PAPER – II PHARMACEUTICAL CHEMISTRY
(PHARMACEUTICAL SCIENCES)

Day : **Tuesday** Time : **10.00 AM TO 01.00 PM**
Date : **26/06/2018** **S-2018-4778** Max. Marks : 100

N.B.:

1) Attempt **ANY FIVE** questions from each section.
2) Figures to the right indicate **FULL** marks.
3) Draw neat and labeled diagrams, **WHEREVER** necessary.
4) Answers to both the sections should be written in **SEPARATE** answer books.

SECTION – I

Q.1 Explain in detail the principle and applications of HPLC. **[10]**

Q.2 Discuss in detail the Prodrug concept. Classify and give significant applications. **[10]**

Q.3 Write in detail the applications of IR spectroscopy. **[10]**

Q.4 Explain the interpretation aspects of NMR in structure elucidation. **[10]**

Q.5 What do you mean by combinatorial chemistry? Explain combinatorial approaches and applications. **[10]**

Q.6 Write short note on **ANY TWO** of the following: **[10]**

a) MC lafferty rearrangement in MS

b) Limitations of prodrug concept

c) Assays and Screening of Combinatorial Libraries

SECTION – II

Q.7 Discuss the protection-deprotection of carboxyl and amino groups. **[10]**

Q.8 Define QSAR and discuss any two quantitative models of QSAR in detail. **[10]**

Q.9 What are the energy minimization methods in molecular modeling? Explain any two in detail. **[10]**

Q.10 Explain structure based drug design process in drug discovery. **[10]**

Q.11 Discuss the High Throughput Screening in detail. **[10]**

Q.12 Write short note on **ANY TWO** of the following: **[10]**

a) Parameters of QSAR

b) Molecular mechanics in molecular modeling

c) Applications of Free Wilson Analysis

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