Pre. Ph.D. Course Work (2017 Course) : (Pharmaceutical Chemistry)
: SUMMER - 2019

SUBJECT : PAPER – II : RECENT ADVANCES IN PHARMACEUTICAL CHEMISTRY

Day : Wednesday
Date : 24/04/2019

Time : 10.00 AM TO 1.00 PM
Max. Marks : 100

S-2019-5354

N.B.

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

SECTION – I

Q.1 Discuss the various types of HPLC columns in detail. **(10)**

Q.2 Discuss finger printing in HPTLC with respect to herbal analysis. **(10)**

Q.3 Classify prodrugs with suitable examples. Discuss in detail the applications of prodrugs to improve bioavailability and reduce side effects. **(10)**

Q.4 What are various combinational approaches with reference to creation of chemical peptide and small molecule library? **(10)**

Q.5 Explain the interpretation of NMR in structure elucidation. **(10)**

Q.6 Write short notes on **ANY TWO:** **(10)**

a) Macromolecular prodrugs
b) High throughput screening
c) Applications of GC-MS

SECTION – II

Q.7 Explain indirect drug design process in drug discovery. Write the advantages and disadvantages of this process. **(10)**

Q.8 Discuss protection-deprotection of carboxyl and amino groups. **(10)**

Q.9 Discuss Hanch Analysis in detail. What are the advantages and limitations of this approach? **(10)**

Q.10 Explain ligand design based on 3D structure of receptor. **(10)**

Q.11 Explain the role of Steric Parameters in QSAR. Discuss various steric parameters in detail. **(10)**

Q.12 Write short notes on **ANY TWO:** **(10)**

a) Target selection
b) Applications of Free Wilson analysis
c) Strcutre based drug design

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