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DF-1476

M. Sc. (Sem. III) Examination

March / April – 2016

Paper - III : Pharmaceutical Chemistry (Drug Metabolism, Pharmaceutical & Pharmacognosy-I)

Time : **3** Hours] [Total Marks : **70**

Instructions :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ **M. SC. (SEM. III)**

Name of the Subject :

☛ **PAPER - III : PHARMACEUTICAL CHEMISTRY**

☛ Subject Code No. : **1 4 7 6** ☛ Section No. (1, 2,.....) : **Nil**

Seat No. :

Student's Signature

(2) Figures to the right indicate full marks.

1 Answers any **three** of the following **18**

a) Give importance of stereo-electronic structures. Discuss the role of configuration in drug design process.

b) What is hydrogen bonding? Giving examples discuss the role of hydrogen bonding in lipophilicity of drug.

c) What are the objectives of drug designing? Discuss them with suitable examples.

d) Differentiate endogenous and exogenous compounds. Discuss their applications in drug designing.

2 Answers any **three** of the following **18**

a) What are prodrugs? Discuss with suitable examples bio precursor and carrier prodrugs.

b) What is Biotransformation? Explain the role of stereochemistry in drug Metabolism.

c) Discuss general metabolic routes for drugs in body and their kinetics.

d) Name the first pass reactions in drug metabolism. Discuss them with suitable examples.

3 Answers any **three** of the following **18**

a) Give a brief account of Taft steric parameter (Es) and its significance.

b) Which parameters are used to represent the lipophilicity in QSAR? Explain any two of them in detail.

c) What is SAR? Giving illustration discuss the introduction of new substituents in drug activity?

d) Explain Hammet constant σ and ρ. Discuss their significance.

4 Answers any **three** of the following **16**

a) How the positions of the water solubilizing group affect drug designing? Discuss various methods of their introduction.

b) Enlists the different parameters which affect the quantitative structure activity relationships. Discuss any three of them in detail.

c) Distinguish configuration and conformational analysis. Discuss the significance of conformation in drug designing.

d) Explain in brief:

i. Lipophilic substitution constants

ii. Electronic effects and

iii. Molar refractivity.