P. G. Diploma in Chemo-informatics
Annual Examination – 2010
Drug Design and Discovery
PGDC – 108

Time allowed : 2½ Hours

Max Marks:70

Section – A

Attempt all questions. Each question carries one(1) mark.   [1x10]
Answer the following in One phrase or sentence only.

1. Define pharmacogenomics.
2. What do you mean by 'hit' identification?
3. What is NCE?
4. Give the equation for calculating redox potential.
5. What is Hausch equation?
6. Enumerate the limitation of π values.
7. What is Ferguson principle?
8. Give uses of molecular graphics.
9. What is the causative agent of AIDS?
10. What do you mean by QSAR?

Section – B

Answer any **six** of the following: [6 x 5 = 30]

1. What is the role of ionization constant in drug design?
2. Describe technological advances that make RACHEL software package superior to other packages.
3. What are major tasks and concerns in drug development?
4. Give the current roles of computer in drug design.
5. Write down various methods for design of enzyme inhibitors.
6. How to exploit the side effects of drugs?
7. Discuss the role of chelates in medicine.
8. Discuss the concept of produrgs, Hard drugs and soft drugs.

Section – C

Answer any **THREE** questions of the following   [3 x 10 = 30]

1. What molecular modifications can be made to improve selectivity of action?
2. Discuss chemical parameters employed in drug design.
3. Describe major steps in drug design process from 'scratch'.
4. How to predict bioactivities based on certain physicochemical constants?
5. Write short notes on
   a) Biological properties of simple functional groups.
   b) Bioisosterism