BACHELOR of PHARMACY EXAMINATION, 2019

(4th YEAR 2nd Semester)

Medicinal Chemistry-IV

Time : Three hours

Full Marks : 100

Group A

Answer at least any two from each group.

1. Define CADD. Give an outline how a drug marketed through Drug Discovery and Development Process. 2+18=20
2. Define QSAR. In QSAR study, how the physicochemical properties (only hydrophobic and electronic parameter) of the substituents affect the biological activity. Discuss with suitable example. 3+17=20
3. What are the steps involved for the development of QSAR models? Define five statistical parameters which are used for validation of a QSAR model. What are the advantages of CADD over traditional drug design approaches? 5+10+5=20
4. Write short notes on (any four) (4*5=20)
   a) Hansch analysis
   b) CoMFA
   c) H-bonding
   d) Ionic bonding and covalent bonding
   e) Pharmacophore
   f) Docking

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(4th Year, 2nd Semester)
MEDICINAL CHEMISTRY – IV

Answer any **five** questions, taking at least **two** from each group.

GROUP – B

1. a) Define and classify with examples different immunosuppressant drugs. 4

b) Give structure activity relationship of cyclosporine A. Describe the synthesis of azathioprine with schematic diagram. 2+2

c) Why mycophenolate mofetil is termed prodrug? Describe the source, mechanism of action, structure activity relationship and synthesis of mycophenolate mofetil. 1+2+3+3+3

2. a) What are hormones? Classify hormones according to their chemical nature. 1+3

b) What are glucocorticoids? Describe the structure activity relationship and synthesis of corticosteroids using hydrocortisone as model drug.2+4+4

c) Describe the term androgen with example. Discuss the structure activity relationship of androgens. 2+4

3. a) Explain the source of the term "vitamin". How are they classified? 1+3

b) Describe the structural features of vitamin A. How it is involved in wald's visual cycle? 4+4

c) Describe the chemistry, structure activity relationship and synthesis of thiamine. 2+3+3

4. Describe synthesis of the following (any four) 5+5+5+5

a) Pantothenic acid

b) Biotin

c) Folic acid

d) Nicotinic acid

e) Riboflavin

f) Cyclophosphamide

g) Leflunomide