AQ – 1048

Third Semester M. Sc. (Part – II) (CBCS) Examination

PHARMACEUTICAL CHEMISTRY

3 SA 2 : Medicinal Chemistry – I

P. Pages : 4

Time : Three Hours] [Max. Marks : 80

Note : (1) All questions are compulsory and carry equal marks..
(2) Give reactions and mechanism wherever necessary.

1. (a) Discuss the historical development in Pharmaceuticals. 6

(b) How is SAR useful in development of new drugs ? Explain. 6

(c) Give specific clinical applications of antineoplastic agents. 4

OR

(p) Discuss important aspects of Pharmaceuticals. 6

5. (a) Discuss the chemistry underlying in the development of HIV agents. 6

(b) What are antineoplastic agents ? Discuss their mode of action. 5

(c) What are prostaglandins and Leukotrienes ? What role do they play in the body ? 5

OR

(p) What are antiviral agents ? Give synthesis of Amantidine hydrochloride. 6

(q) Discuss the clinical application and mode of action of antihypertensive agents. 5

(r) Discuss the SAR of anticancer agents in treatment of variety of cancers. 5

(q) Comment on nomenclature of Pharmaceuticals. 6

(r) Give commercial route of synthesis for antiviral agent. 4

2. (a) Discuss the different phases of development in QSAR. 8

(b) Discuss the nature of drug receptors. 8

OR

(p) Discuss the empirical fragment evaluation of SAR. 6

(q) Discuss the isolation of Drug Receptors. 5

(r) Describe theoretical method of Hansch analysis. 5

3. (a) Discuss the molecular mechanics approach in drug design. 6

(b) In calculation of affinity explain multiple bonding mode. 5

(c) Explain role of geometric isomers in design of drug. 5

OR

(p) Discuss Bioisosterism in detail. 8

(q) Comments on unknown receptors. 4

(r) Explain the effect of alteration of chain branching on their activity with example. 4

4. (a) Explain the concept of Prodrugs. 6

(b) What are double prodrugs ? How are they useful for site specific delivery of drug in desired form ? 6

(c) How are prodrugs designed ? 4

OR

(p) In relation to prodrug discuss Pharmacokinetic and bio–Pharmaceutical aspects. 6

(q) What are the factors affecting the obsorption of prodrugs ? 6

(r) Give an account of distribution of prodrug in body. 4