MASTER OF PHARMACY 1st YR 2nd SEMESTER-2017

PHARMACEUTICAL CHEMISTRY- III

Times : Three hours Full Marks : 100

Answer any ***five*** questions taking atleast ***one*** from each group.

GROUP - A

1. a.i) What are the issues in drug discovery?
   ii) What are the failure of biology?
   iii) How can you go for rational design?
   iv) Mention some new chemical entities appeared in last decade.
   v) Mention some newer drugs recently approved.

   2×5=10

   b. Why are the great expectations of 32 Indian Bitter pills fizzled out? Explain with some examples. 10

2. Discuss in brief the significance of the following for 'lead finding' in drug discovery and development:-
   a. High Throughput Screening
   b. Screening Synthetic Compound libraries
   c. Screening of natural products
   d. Identifying a bioassay
   e. Target specificity and selectivity between species

   4×5=20

3. Potential of plants secondary metabolites used as life saving drugs. Explain with appropriate examples and structures. 20

Ref. No.:Ex/PG/PHAR/T/128E/ 2017

Name of the Examinations: M.PHARMACY FIRST YEAR SECOND SEMESTER-2017

Subject: PHARMACEUTICAL CHEMISTRY- III Time: THREE HOURS Full Marks: 100

Group-B

Answer at least one question from this group

Q.4. a) Outline the synthesis of any new generation general anesthetic. Mention two more newer general anesthetics also with structures. (8+2)

b) What is reductive amination process? Show synthetic details of any drug you have studied involving this stage. (2+6)

c) Discuss Mannich reaction with examples involved in drug synthesis. (2)

Q.5.a) From the structure of prostaglandin precursor, show how different drugs are generated in different therapeutic segments with different stereo-chemical configurations. (10)

b) What is Wittig reagent? Show how this reagent helps for a facile synthesis of two important PG derivatives. (2+4+4)

Q.6 a) Briefly discuss the stereo-selective and stereo-specific synthesis with examples. (2.5+2.5)

b)Explain Auwers-Skita rule for the catalytic hydrogenation of steroids. What are the instrumental methods used to characterize stereo-isomers? (3+2)

c) Explain the important observations (Ruzicka) from conformational analysis of steroids. (5)

d)How bridged ring systems are different from fused ring system? Explain with structures and physico chemical attributes of some naturally occurring bridged system. (5)

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M. Pharm. 1st Year 2nd Semester Examination 2017

Pharmaceutical Chemistry III

Time: 3 h **Full Marks:** 100

Group 'C'

7. Write notes on:

a) Activation of proto-oncogenes

b) Inactivation of tumor-suppressor genes

c) Consequences of genetic defects in cancer

iv) Abnormal signaling pathways in cancer

v) Abnormalities in cell cycle regulation. 5 X 4 = 20

8. a) How do you synthesize gefitinib? Write chemical equations.

b) Discuss the development, synthesis and binding interactions of imatinib.

c) Write a note on histone deacetylase inhibitors. 4 + 3 X 4 + 4 = 20