

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: BPHARM
BRANCH: PHARMACY

SEMESTER : VI
SESSION : SP/18

SUBJECT: PS6407 SYNTHETIC MEDICINAL I

TIME: 3. Hours

FULL MARKS: 60

INSTRUCTIONS:

1. The question paper contains 7 questions each of 12 marks and total 84 marks.
 2. Candidates may attempt any 5 questions maximum of 60 marks.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
-

- Q.1(a) Define the terms: Agonist & Antagonists. [2]
Q.1(b) Write one example with structure for the following: (i) opioid agonist, (ii) opioid mixed agonist & antagonist (iii) opioid antagonist [4]
Q.1(c) (i) Discuss the SAR of 4,5-epoxymorphinans. (ii) How will you synthesize Meperidine? [6]
- Q.2(a) Define the terms: Analgesic and Anti-inflammatory. [2]
Q.2(b) Explain *Full Salol* and *Partial Salol* with suitable examples. [4]
Q.2(c) Enumerate the synthesis of (i) Indomethacin and (ii) Ibuprofen. [6]
- Q.3(a) List the problems associated with First Generation Antihistamines. [2]
Q.3(b) Give the general structure for the discussion of SAR with respect to First Generation Antihistamines. Discuss in detail the modifications with reference to linker region. [4]
Q.3(c) Write the structure, IUPAC nomenclature and Assay method for (i) Diphenhydramine and (ii) Cimetidine. [6]
- Q.4(a) Define Local anesthetics. [2]
Q.4(b) Enumerate the Ideal Characteristics of Local anesthetics. [4]
Q.4(c) Write the name & structure of a local anesthetic whose synthesis starts with xylene. Write the IUPAC nomenclature, synthesis and assay method for the same. [6]
- Q.5(a) Discuss the neurochemical theory of General Anesthetics. [2]
Q.5(b) Write the general structure for discussing the SAR of barbiturates. Discuss in detail the substitutions at C5 position. [4]
Q.5(c) How will you synthesize (i) Diazepam and (ii) Chlorpromazine? [6]
- Q.6(a) Name the drug used for the treatment of trigeminal neuralgia. Write its structure. [2]
Q.6(b) Discuss the mode of action for the following drugs: (i) Phenytoin, (ii) Phenobarbitone, (iii) Sodium valproate and (iv) Trimethadione. [4]
Q.6(c) Write the synthesis of (i) Clonazepam and (ii) Amitriptyline. [6]
- Q.7(a) What are oral contraceptives? [2]
Q.7(b) Write a note on Intra uterine devices. [4]
Q.7(c) Suggest measures to check exponential growth of human population. [6]

:::::03-05-2018 M:::::