

Name of The Examination: B.PHARMACEUTICAL TECHNOLOGY THIRD YEAR SECOND SEMESTER-2017

Subject: MEDICINAL CHEMISTRY-II

Time: THREE HOURS

FULL MARKS: 100

Answer any five questions, taking at least one from each group

Group-A

Q.1. What are stages of General Anesthesia? Classify the General Anesthetic Drugs. Outline the synthetic schemes of an i) ultra short acting barbiturate ii) Narcotic analgesic 5+5+5+5

Q.2. Write briefly the SAR of benzoic acid derivatives. Classify the local anesthetics. Name two recent local anesthetics and mention the clinical benefits over the earlier drugs.

Complete the reaction scheme as outlined below

a) 4-hydroxyacetophenone + Butyl bromide ----- Compound (A) ----- i) HCHO and Piperidine -----
Compound (B)

Identify (A) and (B) with structures

b) Pyridine-2-ylidene chloride to Bupivacaine 5+5+2+4+4

Q.3. Classify Benzodiazepines. Write main points related to S.A.R. of Barbiturates. What is the mechanism of action of Benzodiazepines. Outline the synthesis of Alprazolam. 5+5+5+5

Q.4. Briefly explain different types of Epileptic Seizures. What is the difference between Phenytoin and Fosphenytoin? Write the mechanism of Pregabalin. Outline the synthesis of a) Sodium Valproate and b) Progabide. 5+2+3+5+5

Q.5. Distinguish between Psychosis and Neurosis. Classify anti-psychotic drugs. Outline synthesis of a) Loxapine b) Clozapine. 2+8+5+5

Q.6. What are the types of depressive syndromes. Classify anti-depressant drugs. Outline the synthesis of an antidepressant drug which acts on nicotinic receptor also.

Derive S.A.R. information from the structures of newer anti-depressant drugs. 5+5+5+5

GROUP B

Answers to all parts of a question should be at the same place of the answer-script and in the same order as they appear in the question paper.

7. (a) Write notes on: [4 + 4 = 8]
(i) Automatic and nonautomatic fibres (ii) Classification of antihypertensive drugs.
(b) Outline synthesis of any one antihypertensive drug having each of the following nuclei/fragments
(i) Phthalazine (ii) Benzthiazepine (iii) Azocine [3 x 4]
8. Outline synthesis and mode of action of the following drugs:
(i) Disopyramide (ii) Flecainide (iii) Isosorbide dinitrate (iv) Lidocaine [4 x 5]

B. Pharm. 3rd Year 2nd Semester 2017

Medicinal Chemistry II

Time: 3 h

Full Marks: 100

Group 'C'Answer at least one question from this group.

9. a) Discuss the synthetic steps of preparations of

(i) ammonium chloride, (ii) glycerol, (iii) urea, (iv) mannitol and (v) isosorbide.

b) How do you prepare pharmaceutical grades of (i) ammonium chloride, (ii) glycerol and (iii) urea.

$$3+5+4+3+2+3 \times 1 = 20$$

10. Discuss roles of chlorosulphonic acid in the synthesis of following drugs:

(i) Methazolamide, (ii) Bendroflumethiazide, (iii) Dichlorophenamide, (iv) Benzothiazide and (v) Disulphamide.

$$4 \times 5 = 20$$