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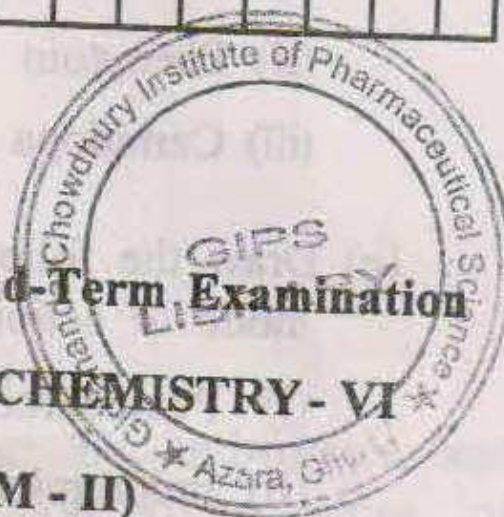
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2016

B. Pharm 6th Semester End-Term Examination

PHARMACEUTICAL CHEMISTRY - VI

(MED. CHEM - II)



Full Marks-100 Pass Marks-35 Time-Three hours

The figures in the margin indicate full marks  
for the questions.

1. Answer any *ten* questions :  $3 \times 10 = 30$
- (a) Define the term steroids with examples. What is Diel's hydrocarbon ?
  - (b) Write down the nomenclature and stereochemistry of steroid hormones.
  - (c) Classify general anaesthetics. Write down the synthesis of Ketamine.

[Turn over

(d) Draw the structure and IUPAC name of the following drugs :

(i) Benzocaine

(ii) Phenytoin

(iii) Carbidopa

(e) Draw the following structure and write the mode of action of following drugs :

(i) Pentobarbitone

(ii) Imipramine

(iii) Methyl dopa

(f) Classify antipsychotic drugs. Draw the structure of drugs in each class. Write down the mechanism of action of chlorpromazine.

(g) Draw the structure of acetazolamide and nifedipine. Discuss the mode of action of these drugs.

(h) Write the synthesis of following drugs :

(i) Clofibrate

(ii) Diazepam

(i) Discuss the mode of action of opioid analgesics and antidepressant drugs.

(j) Draw the structure of the following drugs :

(i) Testosterone

(ii) Carbamazepine

(iii) Nikethamide

(iv) Procainamide

(v) Nitroglycerine

(vi) Prednesolone

(k) What do you mean by anti-tussive and anxiolytics ? Mention some drugs of importance and write the mode of action of these class of agents.

(l) Write down the synthesis of the following drugs :

(i) Estradiol

(ii) Levodopa.

2. Answer any *eight* questions :  $5 \times 8 = 40$

(a) Classify steroidal drugs. Discuss the structural feature, synthesis and therapeutic applications of the following drugs :

(i) Progesterone

(ii) Stanazolol



(b) Write down the synthetic protocol of the following drugs :

(i) Dexamethasone

(ii) Thiopental

(c) Discuss the SAR of the following class of drugs :

(i) Phenothiazine derivative

(ii) Benzodiazepine derivative

(d) Classify antihypertensive drugs. Write down the synthesis of captopril and procainamide.

(e) Write the synthetic protocol of methadone and pentazocine. Discuss the SAR of morphine derivative.

(f) Classify antiparkinson drug. Draw the structure of drug in each class. Write the synthesis of carbidopa. Describe the mode of action of levodopa and carbidopa.

(g) Classify CNS stimulant drugs. Draw the structure of amphetamine, pemoline, ethamivan, doxapram, theophylline. Write the mode of action of nikethamide.

(h) Write down the synthesis of haloperidol. Describe the mode of action. What do you mean by extra pyramidal side effects ? Draw any structure of drugs belong to atypical antipsychotics.

(i) Classify tricyclic antidepressant drugs. Discuss the mode of action. Write the synthetic protocol of amitriptyline.

(j) Write the synthetic protocol of the following drugs :

(i) Phenytoin

(ii) Lignocaine

(iii) Meprobamate.

3. Answer any *three* questions :  $3 \times 10 = 30$

(a) Discuss about adrenocorticoids and anabolic agents. Write down the synthesis of the following drugs :

(i) Estradiol

(ii) Betamethasone

(iii) Prednesolone

(b) Classify hypnotics and sedatives. Draw the structure of each class. Write the mechanism of action of barbiturates. Write the synthesis of the following drugs :

(i) Phenobarbitone

(ii) Ethosuximide

(iii) Chlorpromazine

(c) (i) Classify antiarrhythmic drugs. Draw the structure of drugs of each class. Discuss the mode of action of each class.

(ii) Write down the synthesis of following drugs :

(a) Coumarin

(b) Methyldopa

(c) Propanolol

(d) Write a note on cardiovascular drugs.