

28-05-2018

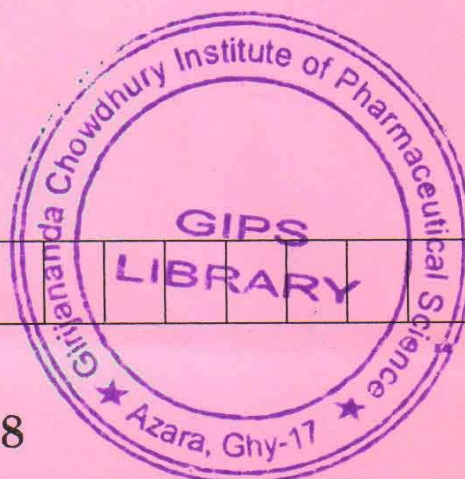
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PY 132603

Roll No. of candidate

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2018



B.Pharm. 6th Semester End-Term Examination

PHARMACEUTICAL CHEMISTRY — VI

(MED.CHEM – II)

Full Marks – 100

Time – Three hours

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

Answer Question 1 and any *six* from the rest.

1. Multiple choice questions (Answer *all*) :

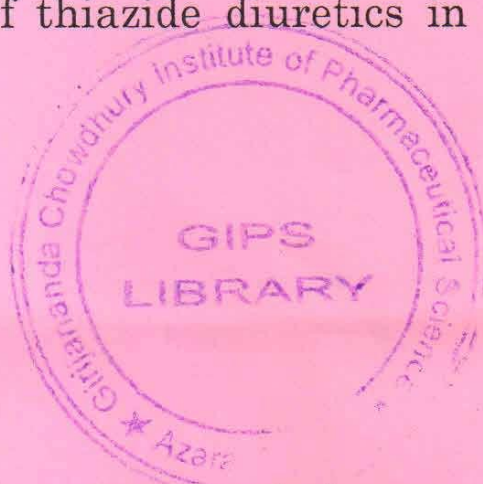
(10 × 1 = 10)

- (a) Steroids on dehydrogenation with selenium at 360°C usually yields
- (i) Diel's hydrocarbon
 - (ii) Picene
 - (iii) Chrysene
 - (iv) 1 :2-Benzphenanthrene
- (b) Which area is involved in Parkinson's disease?
- (i) Neostriatum
 - (ii) Pallidum
 - (iii) Substantia nigra
 - (iv) Amygdala

[Turn over

(c) Primary site of action of thiazide diuretics in the nephron is

- (i) Proximal tubule
- (ii) Distal tubule
- (iii) Loop of Henle
- (iv) Convulated tubules



(d) One of the following drugs does not belong to the benzoic acid class of anaesthetics

- (i) Lignocaine (ii) Cocaine
- (iii) Piperocaine (iv) Hexylcaine

(e) Dibenzocycloheptane ring containing antidepressant drug is

- (i) Amitriptyline (ii) Imipramine
- (iii) Fluoxetine (iv) Venlafaxine

(f) The anticoagulant synthesized using Michael reaction is

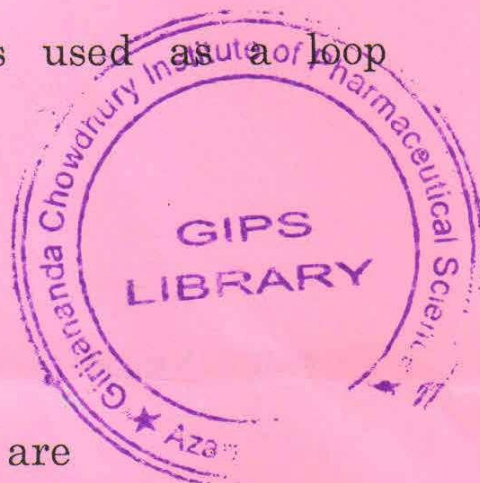
- (i) Phenidione (ii) Warfarin
- (iii) Dicoumarol (iv) Bromindione

(g) Pentobarbitone is

- (i) 5,5-diethyl barbituric acid
- (ii) 5-n-butyl-5-ethyl barbituric acid
- (iii) 5-ethyl-5-isopentyl barbituric acid
- (iv) 5-ethyl-5-(1 methyl-butyl) barbituric acid

(h) Which of the following is used as a loop diuretic?

- (i) Spiranolactone
- (ii) Theophylline
- (iii) Benzathiazide
- (iv) Frusemide



(i) In the steroid nucleus, there are

- (i) Six chiral centres with nucleus, i.e. 5,8,9,10,13 and 14
- (ii) Six chiral centres with nucleus, i.e. 3,8,9,10,12 and 14
- (iii) Six chiral centres with nucleus, i.e. 3,8,9,10,11 and 12
- (iv) Six chiral centres with nucleus, i.e. 5,7,9,10,13 and 16

(j) Which of the following belongs to long-acting barbiturates?

- (i) Pentobarbital
- (ii) Phenobarbital
- (iii) Thiopental
- (iv) Amobarbital

2. Define Angina pectoris. Classify Antianginal drugs and discuss briefly their mode of action. Give the synthetic protocol of Nitroglycerine and Methyldopa.

(2 + 4 + 4 + 2.5 + 2.5)

3. What are local anesthetics? How do they differ from general anesthetics? Describe the synthesis of any two local anesthetics. Describe the SAR of local anaesthetics. (Show structure wherever possible).

(2 + 3 + 5 + 5)

4. Write the synthetic procedure for the preparation of the following drugs : (any FIVE) (5 × 3)
- (a) Stanazolol
 - (b) Amitriptyline
 - (c) Meprobamate
 - (d) Clofibrate
 - (e) Procainamide
 - (f) Cramiphen.
5. Write down the synthetic protocol and uses of Phenytoin and Carbamazepine. Write a note on Opioid analgesics. (7 + 8)
6. Classify anticoagulants with suitable examples and write down the synthesis of any two of them. Explain the mode of action of this class of drugs. (5 + 5 + 5)
7. Define steroids. Write in brief about the nomenclature and stereochemistry of steroids. Outline the synthesis of Testosterone. Write a brief note on Androgens. (2 + 4 + 3 + 6)
8. What are Diuretics? Give an account of various classes of diuretics with suitable examples. Show the structure of the following compounds: Acetazolamide, Chlorthiazide. Give the synthesis of Frusemide. (2 + 6 + 3 + 4)
9. Differentiate between a sedative and a hypnotic. Classify them with structural examples. Discuss in detail the SAR of this class and write the synthesis of Pentobarbitone. (4 + 4 + 4 + 3)

