28-05-2018

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PY 132603

Roll No. of candidate

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

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(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) Dibenzocyeloheptane 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)

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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 Oploid 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)
