



Name :

Roll No. :

Invigilator's Signature :

CS / B.PHARM(OLD) / SEM-5 / PT-503 / 2011-12

2011

**PHARMACEUTICAL CHEMISTRY
(MEDICINAL CHEMISTRY)**

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

GROUP – A

(Multiple Choice Type Questions)

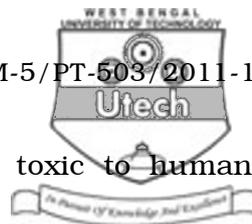
1. Choose the correct alternatives for any *ten* of the following : 10 × 1 = 10
- i) Which one of the following is a second generation H₁ antihistaminic ?
 - a) Dimenhydrinate
 - b) Cyclizine HCl
 - c) Cimetidine
 - d) None of these.
 - ii) To reduce CNS side effect the value of the log P should be
 - a) Less than 2
 - b) Greater than 2
 - c) Exactly 2
 - d) None of these.
 - iii) Which of the following is a quinolone derivative ?
 - a) Phenacetin
 - b) Cinchophen
 - c) Diclofenac Sodium
 - d) Ketoprofen.

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[Turn over



- iv) Which one of the following is an anti-inflammatory drug ?
- a) Furosemide b) Cetrizine
c) Allopurinol d) None of these.
- v) Which drug can be synthesized from diphenyl amine ?
- a) Cyproheptadine b) Antazoline HCl
c) Indomethacin d) Promethazine HCl.
- vi) To exert maximum activity the terminal N atom of an H₁ blocker should be
- a) Primary amine b) Secondary amine
c) Tertiary amine d) None of these.
- vii) Which of the following compounds is directly acting cholinomimetic ?
- a) Carbachol b) Bethanechol
c) Methacholine d) All of these.
- viii) Trans-stibesterol is active due to
- a) the molecular weight is minimum
b) the inter-atomic distance of two 'O' are to that of estrogen
c) it is a steroid
d) none of these.
- ix) Which of the following pair is isosters ?
- a) N & P b) S & P
c) P & O d) S & O.



- x) Organ phosphorous insecticides are toxic to humans due to
- a) they inhibit AchE enzyme irreversibly
 - b) they inhibit ACE reversibly
 - c) they induce AchE
 - d) they induce ACE.
- xi) Curarin alkaloids are
- a) Neuromuscular junction blockers
 - b) Neuronal blockers
 - c) Muscular blockers
 - d) All of these.
- xii) β -receptors are blocked by
- a) Atenolol
 - b) Propanolol
 - c) Paracetamol
 - d) Both (a) and (b).

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

2. Write the cholinergic drugs classification with structure. 5
3. Explain the constitution of Nicotinic and muscular receptors. 5
4. Write down a note on Free Wilson Analysis. 5
5. Write down a note on biosynthesis of eicosanoids. 5



GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

6. a) Write down the role of histamine in our body.
b) Outline the synthesis of any *three* of the following :
(i) Mepyramine maleate
(ii) Diphenhydramine
(iii) Antazoline HCl
(iv) Promethazine HCl
c) Write short note on Hammett constant. $3 + (3 \times 3) + 3$
7. a) Write down the role of log P in drug design.
b) Write down the chemical classification of NSAIDs.
c) Write down the structure and IUPAC names of any four of the following drugs :
(i) Phenyl Butazone
(ii) Mefenamic acid
(iii) Indomethacin
(iv) Ibuprofen
(v) Naproxen. $4 + 3 + (4 \times 2)$
8. Write short notes on the following :
a) Optical isomerism in drugs
b) Geometrical isomerism in drugs
c) Bio-isomerism in drugs. $5 + 5 + 5$
9. Write the synthesis and pharmacological action of the following : 3×5
a) Carbachol
b) Propranolol
c) Decamethonium.