



Name :

Roll No. :

Invigilator's Signature :

**CS/B.PHARM (N)/SEM-7/PT-703/2012-13
2012**

**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)

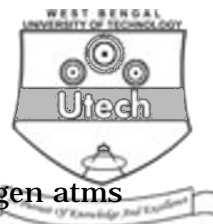
1. Choose the correct alternatives for any *ten* of the following :

10 × 1 = 10

- i) Which one of the following contains Thioimidazole structure ?
- a) Levamisole b) Thiabendazole
c) Mebendazole d) Albendazole.
- ii) Alkali hydrolysis of Penicillin produces
- a) Penicillenic acid b) Penillic acid
c) Penicilloic acid d) Penilloic acid.
- iii) Lipophilicity of Tetracycline increases by elimination of - OHgr at position
- a) C - 5 b) C - 10
c) C - 6 d) C - 3.

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[Turn over



- iv) Biguanides contain
- a) 6-nitrogen atoms b) 5-nitrogen atoms
c) 4-nitrogen atoms d) 7-nitrogen atoms.
- v) Clavulanic acid has a beta lactum ring fused with
- a) Thienyl system b) Thiadiazole system
c) Oxazolidine system d) Thiazolidine.
- vi) Malaria is caused by
- a) Bacteria b) Virus
c) Protozoa d) All of these.
- vii) Cotrimoxazole is the combination of
- a) Sulphamethoxazole and Pyrimethamine
b) Sulphamethoxazole and Trimethoprim
c) Sulphadiazole and Pyrimethamine
d) Sulphadiazine and trimethoprim.
- viii) Alkylating agents generally attack the
- a) N-7 position of Guanine
b) N-9 position of Adenine
c) N-9 position of Guanine
d) N-6 position of Pyrimidine.
- ix) Kaposi's Sarcoma is associated with
- a) Diabetes b) AIDS
c) Tuberculosis d) Ulcer.
- x) An electron withdrawing substituent on the alpha carbon of side chain of Penicillin provides
- a) beta lactamase resistance
b) acid resistance
c) Penicillinase resistance
d) both (a) and (b).
- xi) Insulin is the hormone that facilitates the uptake of
- a) Vitamin b) Calcium
c) Protein d) Glucose.



- xii) Chemically Albendazole is
- Indole derivative
 - Benzimidazole derivative
 - Quinoline derivative
 - Carbazole derivative.
- xiii) Thyroid function is regulated by
- TSH
 - THS
 - GTH
 - ACTH.

GROUP - B

(Short Answer Type Questions)

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

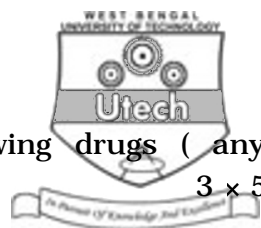
- Write a note on oral hypoglycemic agents with chemical classification.
- Give a brief note on preparation of Insulin and its use. $4 + 1$
- Classify Anti-cancer drug with example. 2
 - Write the Taylor method of synthesis of Methotrexate. 3
- Classify Anti-Malarial agents.
 - Write the SAR of 7-Chloro, 4-amino quinoline. $2 + 3$
- What is the difference between Antibiotics and Chemotherapeutic agents ?
 - Classify Penicillin with examples. $1 + 4$

GROUP - C

(Long Answer Type Questions)

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

- Write short notes on any *three* of the following : 3×5
 - SAR of Tetracycline
 - Mechanism of action of any fluorinated Pyrimidine Anti-fungal drug.
 - Mode of action of Sulphonyl urea
 - Bio-Synthesis, Storage and release of Thyroid hormones.



8. Write down the Synthesis of the following drugs (any three) : 3 × 5

- a) Tinidazole
- b) Albendazole
- c) Pyrimethamine
- d) Glabenclamide.

9. a) What is DM ? 1

b) Classify it. 2

c) Classify oral Antihyper-glycemic agents with examples. 4

d) How do sulphonyl ureas show antihyperglycemic effect ? 4

e) Why is Insulin not administered in oral route ? 2

f) Why Thiazolidine dione is the better option for long term management of DM ? 2

10. a) Classify Anti-Viral drugs with suitable examples. 3

b) Write synthesis of the following compounds : 3 × 4

i) Acyclovir

ii) Ziduvudine

iii) Amentadine.

11. Write short notes on the following :

a) i) Isoniazid

ii) Ethambutol

iii) PAS. 3 + 3 + 3

b) What is the causative organism for Leprosy ? 1

c) Classify antileprotic drugs with suitable examples. 5
