



Name :
Roll No. :
Invigilator's Signature :

CS/B.PHARM(OLD)/SEM-7/PT-703/2011-12

2011

**PHARMACEUTICAL CHEMISTRY
(MEDICINAL)**

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 the following : $10 \times 1 = 10$
- i) Zidovudine is used as
 - a) antimalarial
 - b) antifungal
 - c) antiviral
 - d) antiprotozoal.
 - ii) In insulin acidic chain and basic chain can be connected by
 - a) ether linkage
 - b) peptide linkage
 - c) cross linkage
 - d) none of these.
 - iii) Levodopa is prodrug of
 - a) Ergotamine
 - b) Dopamine
 - c) Insulin
 - d) Proguanil.
 - iv) The antiviral which is Nucleoside analogue is
 - a) Acyclovir
 - b) Amantadine
 - c) Foscarnet
 - d) none of these.

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[Turn over



- v) Inosiplex is a
- specific *T*-cell inhibitor
 - cytotoxic drug
 - immunosuppressant
 - immunostimulant.
- vi) In a chain of insulin replacement of A21(ASN) by alanine cause
- abolition of all activities
 - reduction of activity
 - making fully bioactive compound
 - none of these.
- vii) Benzyl penicillin is also known as
- | | |
|-------------------------|---------------------------|
| a) Penicillin- <i>G</i> | b) Penicillin- <i>V</i> |
| c) Penicillin- <i>F</i> | d) Penicillin- <i>K</i> . |
- viii) Tamoxifen is
- | | |
|--------------------|------------------------|
| a) Estrogenic drug | b) antiestrogenic drug |
| c) anticancer drug | d) none of these. |
- ix) Penicillins act by
- inhibiting cell wall synthesis
 - inhibiting cell protein synthesis
 - binding with nucleic acid
 - inhibiting folic acid synthesis.
- x) Ifosfamide is an alkylating agent. It is an isomer of
- | | |
|---------------------|-----------------|
| a) Cyclophosphamide | b) Procarbazine |
| c) Carmustine | d) Dacarbazine. |



GROUP - B
(Short Answer Type Questions)

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

2. Describe the structure-activity relationship of Thyroid hormones.
3. Write the mode of action and uses of Sulfonylureas.
4. Write a brief note on Immunosuppressants or Immunostimulants.
5. What do you mean by Prodrug ? Write the ideal properties of prodrug.
6. Write a short note on Protease inhibitors and its uses in treatment of AIDS.

GROUP - C
(Long Answer Type Questions)

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

7. a) Define antiviral drugs and classify antiviral drugs chemically as well as based on treatment protocol.
b) Write the mode of action (MOA) of reverse transcriptase inhibitors.
c) Show the synthesis of any *one* of the following antiviral drugs : Amantadine, Indoxuridine. $1 + 6 + 5 + 3$
8. a) Discuss in short about prodrugs giving examples with structures.
b) Write the structure-activity relationship of Sulfonyl-ureas. $8 + 7$

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9. a) Write down the chemistry and structure-activity relationship of insulin.
- b) Show the synthesis of any two of the oral Hypoglycemic agents. 3 + 6 + 6
10. a) Write the Etiology of cancer and give a broad classification of anticancer agent.
- b) Write the mode of action Methotrexate and its uses.
- c) Write down any synthesis of Alkylating agent.
11. Write briefly about structure-activity relationship and therapeutic uses of sulphonamides. Show the synthesis of any two sulphonamide drugs. 5 + 4 + 6

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