



Name :

Roll No. :

Invigilator's Signature :

**CS/M.PHARM/SEM-1/MPT-103 (2)/2012-13
2012**

ADVANCED PHARMACEUTICAL CHEMISTRY-II

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) CCR 5 and CXC R4 are the binding sites for

- | | |
|-----------|------------|
| a) gp 160 | b) p 24 |
| c) gp 41 | d) gp 120. |

ii) Which of the following is NOT a protein ?

- | | |
|-------------|------------------|
| a) Insulin | b) Inulin |
| c) Glucagon | d) Somatostatin. |



- iii) A cardinal symptom of Parkinson's disease is
- a) Bradykinesia
 - b) loss of memory
 - c) loss of cognitive function
 - d) muscular paralysis.
- iv) Interferon α_{2a} is used in the treatment of
- a) Cancer
 - b) AIDS
 - c) Parkinson's disease
 - d) Alzheimer's disease.
- v) Which one of the following is non-structural and regulatory gene of HIV ?
- a) vif
 - b) pol
 - c) gag
 - d) env.
- vi) Advantages of enzyme immobilization are all of the following *except*
- a) Continuous use
 - b) Less contaminated
 - c) Instability
 - d) Cost effectiveness.
- vii) Which of the following terminologies is NOT associated with protein chemistry ?
- a) Isoelectric point
 - b) Saponification number
 - c) Functional domain
 - d) α -helix.
- viii) How many chiral centres are present in naproxene ?
- a) 1
 - b) 2
 - c) 4
 - d) None of these.



GROUP - C

(Long Answer Type Questions)

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

9. a) What is Parkinsonism ?
b) What are the causes of Parkinson's disease ?
c) What are the drugs used in management of this disease ?
d) Write down the synthesis of any two anti-Parkinson's drug. $2 + 3 \frac{1}{2} + 4 \frac{1}{2} + (2 \times 2 \frac{1}{2})$
10. a) Write in brief on 'Insulin'.
b) Illustrate the chemistry and stability of protein and peptide drugs. $6 \frac{1}{2} + 3 + 5 \frac{1}{2}$
11. a) Write down the advantages and disadvantages associated with microbial synthesis of drugs.
b) How oxygen is supplied in the fermenter during the manufacture of penicillin ? $8 + 7$
12. Discuss about the parallel synthesis for a combinatorial synthesis. How does this method differ from Furka's mix and split method ? Mention the various advantages and disadvantages of Boc and Fmoc as amino group blocker. $7 + 5 + 3$
13. Discuss about the different approaches of asymmetric synthesis. Show how the enantiomerically pure compound can be synthesized (any two) : $8 + 2 \times 3 \frac{1}{2}$
- i) Diltiazem
ii) S-Timolol
iii) Naproxen.