



Name : .....

Roll No. : .....

Invigilator's Signature : .....

**CS/M.Pharm/SEM-1/MPT-103(2)/2009-10**

**2009**

**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) In photolithography technique which of the following is used as photolabile group ?
- a) Aminoveratryloxy      b) Nitroveratryloxy  
c) Hydroxyveratryloxy      d) Veratryl.
- ii) The hormone relaxin is a/an
- a) tripeptide      b) octapeptide  
c) heptapeptide      d) polypeptide.
- iii) How many naturally occurring amino-acids are DNA coded ?
- a) 30      b) 18  
c) 22      d) 20.





- x) Interferron  $\alpha_{2a}$  is used in the treatment of
- a) parkinsonism                      b) alzheimer's disease  
c) AIDS                                      d) cancer.
- xi) Which of the following  $\alpha$ -amino blocker is cleared by using piperidine ?
- a) Cbz                                      b) BOC  
c) Fmoc                                      d) none of these.
- xii) How many amino acids are present in the structure of proinsulin ?
- a) 89                                      b) 51  
c) 85                                      d) None of these.

**GROUP – B**  
**( Short Answer Type Questions )**

Answer any *three* of the following.                      3 × 5 = 15

- Enumerate the various applications of solid phase parallel synthesis.
- What are the different methods employed in measuring the activity in the process of high throughput screening ?
- Give a brief note on importance of microorganisms in steroidal biosynthesis and antibiotic synthesis with necessary examples.
- Write in brief about molecular tagging.
- Write shortly advantages and disadvantages of solid phase peptide synthesis.



**GROUP – C**

**( Long Answer Type Questions )**

Answer any *three* of the following.

$3 \times 15 = 45$

7. a) What is Parkinsonism ? What are the causes of parkinsonism disease ? What are the drugs used in management of parkinsonism disease ?  $2 + 3 + 4$
- b) Write the synthesis of any two anti-parkinsonis drugs.  $3 \times 2$
8. a) Define the following terms :  
Chirality, Chiral centre, Enantiomers diastereomers. 4
- b) Write a brief note on absolute asymmetric synthesis. 6
- c) Outline the asymmetric synthesis of any *one* of the following compounds :  
diltiazem, naproxen. 5
9. a) Justify the statement “no protein no life”. 5
- b) What are the different approaches taken to minimize degradation of protein and peptide drugs ? 5
- c) Write a note on Fmoc as  $\alpha$ -amino blocker. 5
10. a) Write a note on various linkers used in combinatorial synthesis. 5
- b) Discuss why combinatorial synthesis is a useful approach in the field of drug discovery. 4
- c) Write short notes on any *two* of the following :  $3 \times 2$
- i) photolithography
  - ii) radiometric assay
  - iii) solution phase combinatorial synthesis
  - iv) safety catch linker ( SCAL ).