ADVANCED PHARMACEUTICS (SEMESTER - 8)

CS/B.Pharm/SEM-8/PT-809B/09



1. .....
Signature of Invigilator

2. .....
Signature of the Officer-in-Charge

Reg. No. | | | | | | | | | | | | | | | |

Roll No. of the Candidate | | | | | | | | | | | | | | | |

CS/B.Pharm/SEM-8/PT-809B/09

ENGINEERING & MANAGEMENT EXAMINATIONS, MAY – 2009

ADVANCED PHARMACEUTICS (SEMESTER - 8)

Time : 3 Hours] [Full Marks : 70

INSTRUCTIONS TO THE CANDIDATES :

1. This Booklet is a Question-cum-Answer Booklet. The Booklet consists of **32 pages**. The questions of this concerned subject commence from Page No. 3.
2. a) In **Group – A**, Questions are of Multiple Choice type. You have to write the correct choice in the box provided **against each question**.
   b) For **Groups – B** & **C** you have to answer the questions in the space provided marked 'Answer Sheet'. Questions of **Group – B** are Short answer type. Questions of **Group – C** are Long answer type. Write on both sides of the paper.
3. **Fill in your Roll No. in the box** provided as in your Admit Card before answering the questions.
4. Read the instructions given inside carefully before answering.
5. You should not forget to write the corresponding question numbers while answering.
6. Do not write your name or put any special mark in the booklet that may disclose your identity, which will render you liable to disqualification. Any candidate found copying will be subject to Disciplinary Action under the relevant rules.
7. **Use of Mobile Phone and Programmable Calculator is totally prohibited in the examination hall.**
8. You should return the booklet to the invigilator at the end of the examination and should not take any page of this booklet with you outside the examination hall, **which will lead to disqualification**.
9. Rough work, if necessary is to be done in this booklet only and cross it through.

No additional sheets are to be used and no loose paper will be provided

FOR OFFICE USE / EVALUATION ONLY

Marks Obtained

	Group – A										Group – B			Group – C				
Question Number																	***Total Marks***	***Examiner's Signature***
Marks Obtained																		

.....

Head-Examiner/Co-Ordinator/Scrutineer

88914 B/C (02/05)

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ADVANCED PHARMACEUTICS

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GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for any *ten* of the following : 10 ∞ 1 = 10

i) One of the substances listed is used as mucoadhesive is

a) Acacia b) S.C.M.C

c) Burnt sugar d) Saccharin. ☐

ii) Surfactants are characterized by the presence of

a) water solubilising and fat solubilising groups in the same molecule

b) only negative charges

c) only positive charges

d) none of these. ☐

iii) Sigma blade mixers are commonly used in

a) wet granulation b) dry granulation

c) powder mixing d) crude fibre mixing. ☐

iv) Heckel plots depict the relationship between

a) density and relative volume

b) applied pressure and relative volume

c) hardness and tensile strength

d) crushing strength and porosity. ☐

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v) Specific surface means

a) surface area

b) volume

c) surface area of 1 g of material

d) volume of 1 g of material. ☐

vi) Pharmacological activity of a protein type drug will be lost if

a) secondary structure is destabilised

b) tertiary structure is destabilised

c) quanternary structure is destabilised

d) any one of the primary, secondary, tertiary and quarternary structure is destabilised. ☐

vii) For perfect lubrication (no die-wall friction) the value of R is

a) 1 b) 0·75

c) 0·5 d) 2. ☐

viii) Particle size of nanoparticle is

a) > 1 μm b) < 1 μm

c) 1 – 10 μm d) > 100 μm. ☐

ix) Commonly used lipid for the preparation of liposomes is

a) phospholipid b) sphingolipid

c) sterol d) glycosphingolipid. ☐

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x) If concentration of lubricant increases in the preparation of tablet then

a) disintegration time increases

b) disintegration time decreases

c) disintegration time remains same

d) none of these. [ ]

xi) In the preparation of multilayer tablets one of the substances listed that used for hydrophilic matrix coating is

a) CMC b) Shellac

c) Stearyl alcohol d) Bees wax. [ ]

xii) Transducers are used for the determination of compressional force is

a) Metre gauge b) Strain gauge

c) Hardness tester d) None of these. [ ]

GROUP – B

(Short Answer Type Questions)

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

2. How are antibodies prepared by hybridoma technology ?

3. Write a brief note on various formulation approaches to stabilize protein pharmaceuticals.

4. Write a note on drug transport through the biological membrane.

5. Discuss the rationale for targeted drug delivery system.

6. Write notes about recombinant DNA technology for the production of biopharmaceuticals.

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GROUP – C

(Long Answer Type Questions)

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

7. a) What are the objectives for Pilot plant scale up technique ?

   b) Describe pilot plant scale up study used for solid dosage form. 5 + 10

8. Write short notes on any *two* of the following : $2 \times 7\frac{1}{2}$

   a) Binders and lubricants

   b) Phagocytosis and pinocytosis

   c) Dry and wet granulations.

9. a) What is internal volume and encapsulation efficiency of liposome ?

   b) Write any two methods of preparation of nanoparticles.

   c) How will you characterize nanoparticles ? 3 + 6 + 6

10. Describe different steps involved in validation of tabletting process. Explain with a flow chart.

11. What are the various particulate drug carier systems ? How will you carry out the in-vivo tissue distribution studies of microparticles ? How does dopamine targeted to renal tissue by pro-drug approach ? Write about phagocytosis and pinocytosis with example. 2 + 4 + 4 + 5

END

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