

Name : .....

Roll No. : .....

Invigilator's Signature : .....

**CS/B.Pharm/SEM-8/PT-809B/2011**

**2011**

**ADVANCED PHARMACEUTICS**

*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.*

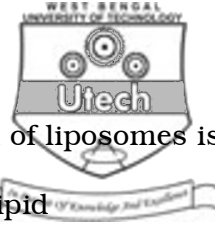
**GROUP – A**

**( Multiple Choice Type Questions )**

1. Choose the correct alternatives for any *ten* of the following :  
10 × 1 = 10
- i) Surfactants are characterized by the presence of
    - a) only negative charges
    - b) only positive charges
    - c) water solubility and fat solubilizing groups in the same molecule
    - d) none of these.
  
  - ii) A particulate drug delivery system containing an intimate mixture of drug and matrix is known as
    - a) capsul
    - b) microsphere
    - c) emulsion
    - d) suspension.

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- iii) Commonly used lipid for the preparation of liposomes is
- a) Phospholipid                      b) Sphgolipid  
c) Sterol                                d) Glycosphingolipid.
- iv) Transducers used for the determination of compressional force are
- a) metre gauge                      b) hardness tester  
c) strain gauge                      d) none of these.
- v) Which of the following is a mucoadhesive ?
- a) Acacia                                b) SCMC  
c) Burnt sugar                      d) Saccharine.
- vi) Chilsonator Roller-Compactor is used in
- a) dry granulation                      b) wet granulation  
c) direct compression              d) none of these.
- vii) The ideal angle of repose for free flowing powder blend is
- a)  $\leq 30^\circ$                               b)  $\geq 30^\circ$   
c)  $\leq 45^\circ$                               d)  $\geq 45^\circ$ .
- viii) Inclusion of a lubricant in the tablet formulation will
- a) increase the die wall friction  
b) decrease the die wall friction  
c) none of these.



- ix) Positive displacement pumps used in preparation of semi-solid products are known as
- transfer pumps
  - peristaltic pumps
  - vacuum pumps.
- x) A disintegrants major function is to
- oppose the efficiency of the tablet binder
  - enhance the efficiency of the tablet binder
  - oppose the activity of the glidant
  - none of these.
- xi) Important considerations in the pilot study include
- evaluation of formula, equipment and raw material
  - stability and uniformity of product
  - both (a) and (b)
  - none of these.
- xii)  $\beta$ -cyclodextrin is a polymer of
- natural origin
  - synthetic origin
  - semi-synthetic origin.

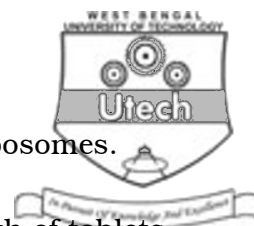
**GROUP – B**

**( Short Answer Type Questions )**

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

- Write a brief note on granulation end point.
- Discuss the rationale for targeted drug delivery system.

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4. Write a short note on the preparation of liposomes.
5. Enumerate the factors affecting the strength of tablets.
6. Write a note on Heckel plot.

**GROUP – C**

**( Long Answer Type Questions )**

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

7. Explain pilot plant scale up studies. Describe in brief the scale up procedure for tablet formulation.  $4 + 11$
8. Write the different stages of tablet compression in details.
9. Describe the kinetics of drug-moisture interaction. What do you mean by micro-pH ? Describe the effect of ions on drug-moisture interaction.  $7 + 3 + 5$
10. Write in brief about any two methods of preparation of nanoparticles. How will you characterize nano-particles ?  $8 + 7$
11. Write a brief note on various formulation approaches to stabilize protein pharmaceuticals. How are antibodies prepared by hybridoma technology ? Write a note on rDNA technology for the production of biopharmaceuticals.  $5 + 5 + 5$

