Name : .....

Roll No. : .....

Invigilator's Signature : .....

CS/B.PHARM(NEW)/SEM-6/PT-606/2012

2012

PHARMACEUTICS

(PHARMACEUTICAL TECHNOLOGY)

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 : $10 \times 1 = 10$

i) The stealth character of nanoparticles can be incorporated by using

a) Neoprene

b) Isoprene

c) Polyoxyethylene copolymer

d) Polyacrylate.

ii) For the sucessful design of controlled release NDDS the partition coefficient should be

a) 1 - 2 b) 3 - 4

c) 0·5 - 0·9 d) 5 - 8.

iii) Which of the following natural polymers can be used for preparation of transdermal patch ?

a) Zein

b) Polybutadiene

c) Polyvinyl chloride

d) Styrene butadiene rubber.

iv) Catguts are a kind of

a) bandage b) adhesive

c) sutures d) ligatures.

v) Liposomes are

a) unilayered or multilayered vesicles of phospholipids

b) fibrinopeptides

c) red blood cells

d) types of enzymes.

vi) Which of the following commonly available large volume Dextrose Injection for intravenous use is isotonic ?

a) 2·5% w/v b) 5·0% w/v

c) 10·0% w/v d) 20·0% w/v.

vii) Pyrogens are chemically

a) lipopolysaccharides b) proteins

c) amino acids d) peptides.

viii) Formulation of injections with medicaments like barbiturates, sulphonamides require

a) sterile water for injection

b) WFI free from CO_2

c) WFI free from O_2

d) none of these.

ix) In parenteral products, 'EDTA' salt is used as

a) buffer b) chelating agent

c) antimicrobial agent d) none of these.

x) As a packaging material for parenteral products, plastic offers all of the following advantages over glass *except*

a) unbreakability

b) improved clarity for visual inspection

c) ease of storage

d) decreased weight.

xi) How much volume (ml) can be injected through 'Intracutaneous route" ?

a) 0·1 to 0·2 ml b) 0·5 to 0·1 ml

c) 1 to 2 ml d) All of these.

xii) A drug having high first pass metabolism will be given in a form of

a) Tablet b) Microcapsule

c) Transdermal patch d) Microsphere.

GROUP – B

(Short Answer Type Questions)

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

2. Differentiate between Liposomes & Niosomes. Give the advantages of Liposomes. 2 + 3

3. What are the specifications for personnel, working in asceptic area during parenteral formulations ? 5

4. What are surgical catguts ? Differentiate between Boilable & Non-boilable catguts. 2 + 3

5. What do you mean by Preformulation research ? Write the essential information. 1 + 4

6. Write a short note on temper-resistant packaging. 5

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. 3 × 15 = 45

7. Define Novel Drug Delivery System (NDDS). Write down the advantages & disadvantages of Controlled Release Drug Delivery System. Describe briefly on different types and formulation of Transdermal Drug Delivery System (TDDS). Write down the drug release from TDDS. 2 + 3 + 7 + 3

8. a) Define microencapsulation. Write about different types of microencapsulation.

   b) Write in detail about the method of preparations and evaluation of microencapsulation. 2 + 3 + 6 + 4

9. a) What is meant by class 100 clean room ?

   b) Discuss about Air control systems being followed in the aseptic area for parenteral formulation.

10. a) What are the types of glasses that are recommended for the different pharmaceutical formulations ? Write the U.S.P. tests for evaluation of glass containers.

    b) Write down the methods for preparation, storage & distribution of water for injection. 2 + 6 + 7

11. a) Write in detail about the following :

    i) Lyophilization, its advantages and disadvantages

    ii) Spray drying.

    b) Write a short note on osmotic pump. 10 + 5