



Name : .....

Roll No. : .....

Invigilator's Signature : .....

**CS/B.Pharm/SEM-4/PT-406/2013**

**2013**

**PHARMACEUTICS ( PHARMACEUTICAL  
TECHNOLOGY-I )**

*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) The concentration of sucrose in simple syrup B.P. is 40

- a) 40.74% w/w                      b) 60.7% w/w  
c) 66.7% w/w                      d) 85% w/w.

ii) PEG is

- a) water insoluble base  
b) water soluble base  
c) miscible with both the phases  
d) none of these.

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iii) Propellant 114 is

- a) Trichlorotrifluoroethane
- b) Dichlorotetrafluoroethane
- c) Trichloromonofluoromethane
- d) none of these.

iv) Ophthalmic preparation containing antibiotic is sterilized by

- a) autoclave
- b) hot air oven
- c) membrane filtration
- d) use of chemicals.

v) Particle size of aerosol is determined by

- a) visual evaluation
- b) cascade impactor
- c) open cup tag apparatus
- d) microscopy.



- vi) Which one of these used as isotonicity adjuster?
- a) Dextrose                      b) NaCl
- c) Boric acid                      d) All of these.
- vii) Blood product are generally dried by
- a) Rotary dryer                      b) Tray dryer
- c) Lyophilizer                      d) Drum dryer.
- viii) Orange tincture is prepared by
- a) Maceration process
- b) Infusion process
- c) Soxhlation process
- d) Decoction process.
- ix) High amount of caffeine enhance the solubility of sodium benzoate that is the example of
- a) Complexation                      b) Hydrotrophy
- c) Solubilization                      d) all of these.

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x) The example of Levigating agent used in semisolid dosage form is

- a) White wax
- b) Liquid paraffin
- c) Bees wax
- d) all of these.

xi) Chloral hydrate should not be used with

- a) Cocoa butter
- b) Witepsol
- c) Glycerogelatin base
- d) none of these.

xii) Glycerogelatin base releases the medicaments by

- a) Swelling in body fluids
- b) Melting at body temperature
- c) Swelling and dissolving in the body fluid
- d) Melting and dissolving at body temperature.



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

Answer any *three* of the following.

3 × 5 = 15

2. Write a short note on the factors affecting skin penetration.
3. Write a short note on preservatives used in oral liquid preparation with suitable example.
4. Write in brief about the materials used to manufacture contact lenses.
5. Define the following of the suppository base :
  - a) Acid value
  - b) Water number
  - c) Iodine value
  - d) Saponification value
  - e) Hydroxyl value.
6. Write in brief on any *two* of the following :
  - a) Dextran
  - b) PVP
  - c) Absorbable gelation sponge.



**GROUP - C**  
**( Long Answer Type Questions )**

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

7. a) Define aerosol.  
b) What are the components of aerosol package ?  
c) Classify propellant with example.  
d) Write a note on solution & suspension aerosol.  
e) Write in details about quality control test for pharmaceutical aerosol.  $1 + 2 + 2 + 5 + 5$

8. What are plasma substitutes ? Give the requirements of an ideal plasma substitute. Write the steps involved during the preparation of dried human plasma and its storage.  $2 + 3 + 5 + 5$

9. a) Write a note on testing or evaluation of suppositories.  
b) Discuss different stability problems of suppositories and their probable remedies.  
c) A prescription contains a formula for suppository as follows :

Amounts for 1

Bismuth subgallate..... 300 mg

Witepsol 45, quantity sufficient for ..... 1 g mould.

Calculate the amount of bismuth subgallate and witepsol 45, required to prepare 8 suppositories using 1 g mould. The displacement value of bismuth subgallate is 3.0.  $6 + 4 + 5$



10. a) Define extraction.
- b) What do you mean by the term 'Menstruum' and 'Marc' ?
- c) What are the factors to be considered during selection of extraction process ?
- d) Why is marc not pressed in the maceration process for unorganized drugs ?
- e) Describe the different steps of percolation.

1 + 2 + 3 + 3 + 6

11. a) What are the different techniques to enhance aqueous solubility of a poorly soluble drug. 6
- b) What do you mean by flocculated and deflocculated suspension ? 5
- c) What is caplocking problem and how can it be solved. 2
- d) Why are official syrups self preservatives ? 2

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