	- Utech
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# 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 :  $10 \times 1 = 10$ 
  - 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.

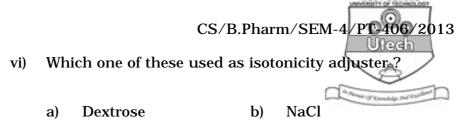
- ii) PEG is
  - a) water insoluble base
  - b) water soluble base
  - c) miscible with both the phases
  - d) none of these.

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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.

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- c) Boric acid d) All of these.
- a) Rotary dryer b) Tray dryer

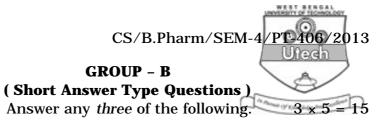
vii) Blood product are generally dried by

- c) Lyophillizer d) Drum dryer.
- viii) Orange tincture is prepared by
  - a) Maceration process
  - b) Infusion process
  - c) Soxhelation 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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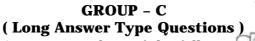
- x) The example of Levigating agent used in semisolid dosage form is
  - a) White wax
- b) Liquid paraffin
- c) Bees wax
- d) all of these.
- xi) Chloral hydrate should not be used with
  - a) Cocoa butter
  - b) Witepsol
  - c) Glycero-gelatin base
  - d) none of these.
- xii) Glycero-gelatin base 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.

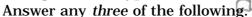
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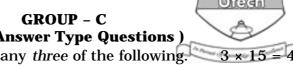


- 2. Write a short note on the factors affecting skin penetration.
- 3. Write a short note on preservatives used in oral liquid preparation with suitable example.
- 4. Write in brief about the materials used to manufacture contact lenses.
- 5. Define the following of the suppository base :
  - a) Acid 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.

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- 7. a) Define aerosol.
  - b) What are the components of aerosol package?
  - Classify propellant with example. c)
  - 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 subtitute. Write the steps involved during the preporation of dried human plasma and its storage.

$$2 + 3 + 5 + 5$$

- 9. Write a note on testing or evaluation of suppositories. a)
  - Discuss different stability problems of suppositories b) 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

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- 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?
  - c) What is caplocking problem and how can it be solved. 2
  - d) Why are official syrups self preservatives?

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