



Name : .....  
Roll No. : .....  
Invigilator's Signature : .....

**CS/B.Pharm (OLD)/SEM-4/PT-406 (1)/2010  
2010**

**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) An ideal suppository base has an acid value of
    - a) 0.5
    - b) < 0.2
    - c) > 0.2
    - d) 1.0
  - ii) Which one of the following is a humectant ?
    - a) Sorbitol 70%
    - b) PEG
    - c) Both of these
    - d) None of these.
  - iii) The low molecular weight glycols are
    - a) liquid
    - b) solid
    - c) gas
    - d) semisolid.
  - iv) The concentration of sucrose in simple syrup I.P. is
    - a) 66.7% w/v
    - b) 66.7% w/w
    - c) 85% v/v
    - d) 60% w/w.





**GROUP – B**

**( Short Answer Type Questions )**

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

2. Write a short note on Dextran-40 injection.
3. Discuss the differences between aquasol-aerosol system and water-based aerosol system.
4. Discuss with explanation any *two* of the following :
  - i) A combination of emulsifiers imparts better stability to an emulsion than a single agent.
  - ii) Thixotropy is a desirable property in pharmaceutical coarse dispersion system.
  - iii) Creaming is a reversible process whereas breaking is an irreversible process.
5. Define the following of a fatty base :
  - a) Iodine value
  - b) Water number
  - c) Saponification value
  - d) Acid value
  - e) Hydroxyl value.
6. Write a short note on antioxidants used in liquid pharmaceutical formulations.

**GROUP – C**

**( Long Answer Type Questions )**

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

7. a) What are eye ointments ? How do they differ from skin ointments ?
- b) Briefly discuss the method of preparation of eye ointment.
- c) What are the advantages and disadvantages of eye ointment ?  $4 + 6 + 5$

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8. a) Write short notes on modified percolation and reverse percolation.
- b) Discuss briefly the packing procedure of a percolation column. Why is imbibition done before packing of percolator ? 8 + ( 5 + 2 )
9. a) Define suppository. Discuss in brief the various types of bases used in the preparation of suppository.
- b) Describe the properties of an ideal suppository base.
- c) Calculate the displacement value of Zinc oxide in theobroma oil suppositories containing 40% of Zinc oxide and is prepared in a 1 gm mould. The weight of 8 suppositories is 11.74 gm. 2 + 5 + 4 + 4
10. a) Write about the various methods of sterilization of ophthalmic product.
- b) Is it necessary to perform bioavailability study for ophthalmic products ?
- c) Describe the preservative efficacy test. 7 + 3 + 5
11. a) Why aerosol product containing anhydrous ethanol and propellant – 11 is not packed in aluminium container ? What is the remedy of this problem ?
- b) What is actuator ? What are the different types of actuator ?
- c) What do you mean by the term 'lacquering' ?
- d) Write short notes on the following :
- i) Flame extension point
- ii) Cascade impactor. 5 + 3 + 1 + 6
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