| Name : | 8 |
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| Roll No. : | A spread (y'r particider Jani Talland |
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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 :

 $10 \times 1 = 10$

i) An ideal suppository base has an acid value of

| a) | 0.5 | b) | < 0.2 |
|----|-----|----|-------|
| a) | 0.5 | D) | < 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

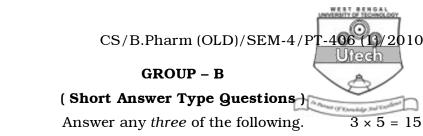
- a) 66.7% w/v b) 66.7% w/w
- c) 85% v/v d) 60% w/w.

[Turn over

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|----------|---|---------------------------------------|-------|-----------------------|--|
| v) | The concentration of alcohol used in Triple Maceration process is | | | | |
| | a) | 20% | b) | 70% | |
| | c) | 90% | d) | 10%. | |
| vi) | Hydroxyethyl methyl methacrylate is used to prepare | | | | |
| | a) | Hard contact lens | b) | Soft contact lens | |
| | c) | both of these | d) | none of these. | |
| vii) | | an ideal suspension, uld be | the | sedimentation volume | |
| | a) | equal to one | b) | less than one | |
| | c) | more than one | d) | zero. | |
| viii) |) In the stability of emulsion, which of the instability steps is prevented by emulsifiers ? | | | | |
| | a) | Cracking | b) | Coalescence | |
| | c) | Creaming | d) | Flocculation. | |
| ix) | | drying blood plasma miques is used | a wl | hich of the following | |
| | a) | Spray drying | b) | Freeze drying | |
| | c) | Vacuum drying | d) | Fluid bed drying. | |
| X) | Which one of the following devices is used to increase the efficiency of drug delivery via aerosols ? | | | | |
| | a) | Tube spacers | b) | Metered valve | |
| | c) | Actuator | d) | Pressure valve. | |
| xi) | An ideal process for preparing tincture of belladona is | | | | |
| | a) | Percolation | b) | Maceration | |
| | c) | Soxhlation | d) | Infusion. | |
| xii) | Brij is a | | | | |
| | a) | solubilizing agent | b) | flavouring agent | |
| | c) | sweetening agent | d) | complexing agent. | |

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- 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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