Seat No.: _____ Enrolment No._____

# GUJARAT TECHNOLOGICAL UNIVERSITY

**B. PHARM. - SEMESTER – VII • EXAMINATION – WINTER 2012**

**Subject code: 270002** **Date: 29/12/2012**

**Subject Name: Pharmaceutical Technology-I**

**Time: 10.30 am - 01.30 pm** **Total Marks: 80**

## Instructions:

1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

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|---|---|---|---|
| Q.1 | (a) | Classify liquid dosage forms. Describe in brief the formulation components of clear liquids with the role of each component in the formula. | 06 |
| | (b) | Explain the stages in manufacturing of clear liquid dosage forms with a suitable flow diagram | 05 |
| | (c) | Enumerate and describe the evaluation tests for Pharmaceutical suspensions in brief | 05 |
| Q.2 | (a) | Explain the mechanism of drug penetration through skin. Enumerate the Pharmaceutical factors affecting drug absorption through skin from semisolid dosage forms | 06 |
| | (b) | Enumerate ideal characteristics of suppository bases. Describe any one method of manufacturing suppositories in detail | 05 |
| | (c) | Describe in detail the evaluation tests for suppositories. | 05 |
| Q.3 | (a) | Define: Pharmaceutical aerosols. Explain the role of propellants in an aerosol system. Classify propellants and describe liquefied gas propellants in brief. | 06 |
| | (b) | Classify filling methods for aerosols. Describe the manufacturing of aerosols by cold filling method. | 05 |
| | (c) | Discuss in brief the physicochemical tests for evaluation of Pharmaceutical Aerosols. | 05 |
| Q.4 | (a) | Explain in brief the design of an aseptic area for manufacturing of parenterals. Give a flow diagram of various stages involved in manufacturing of parenteral products by terminal sterilization process. | 06 |
| | (b) | Explain the criteria for the quality of air in an aseptic area. How is the quality of air controlled in an aseptic area? | 05 |
| | (c) | What are pyrogens? Explain the sources of pyrogens in parenterals. Explain the principle of LAL test for pyrogen testing. | 05 |
| Q.5 | (a) | Give a brief outline of the different stages in form fill seal technology. | 06 |
| | (b) | Describe in brief about the following components used for the formulation of parenterals :( 1) Vehicles. (2) Bulking agents. (3) Preservatives | 05 |
| | (c) | Write a brief note on Parenteral suspensions. | 05 |
| Q. 6 | (a) | Describe the formulation components of eye drops highlighting the role of each component. | 06 |
| | (b) | Discuss in brief about solid inserts for ophthalmic use. | 05 |
| | (c) | Describe types of ointment bases. | 05 |
| Q.7 | (a) | Write a brief note on micro emulsions. | 06 |
| | (b) | Discuss the role of solubilizers in formulation of liquid dosage forms. | 05 |
| | (c) | Discuss in brief about prefilled syringes. | 05 |

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