

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V • EXAMINATION – WINTER • 2014****Subject Code: 153605****Date: 03-12-2014****Subject Name: Microbiology & Formulation Technology of Liquids & Topical****Time: 10.30 am - 01.00 pm****Total Marks: 70****Instructions:**

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

- Q.1** (a) What do you mean by a dosage form? Which are the different types of pharmaceutical dosage forms? **07**
- (b) Name the different cell organelles of a eukaryotic cell draw the structure and mention the function of each **07**
- Q.2** (a) Describe the different defense mechanisms of the body **07**
- (b) (i). Differentiate between: anionic and cationic stain, basic and acidic stain **05**
- (ii). Define taxonomy **02**
- OR**
- (b) (i). Which are different topical dosage forms available? Explain the difference between each. **05**
- (ii). Define: Bacterial smear **02**
- Q.3** (a) Explain preformulation and which are the different preformulation characteristics? Explain each. **07**
- (b) (i). When we use oil immersion lens, resolution is increased. Justify this statement. **05**
- (ii). Define: Prereduced media **02**
- OR**
- Q.3** (a) Mention and explain the classification of culture media in detail. Give examples for each **07**
- (b) Which are the different methods of maintaining and preserving pure cultures. Explain each method briefly. **07**
- Q.4** (a) Explain different liquid dosage form. What is the difference between biphasic and monophasic solutions. **07**
- (b) (i). Define antigen, antibodies. **05**
- (ii). What is the resolution limit of a light microscope? **02**
- OR**
- Q.4** (a) Explain briefly the principle and working of: **07**
- Autoclave
 - Hot air oven
 - Laminar air flow cabinet
 - Bacteriological incubator
- (b) Explain the different physical and chemical method of selection of pure culture. **07**
- Q.5** (a) Give an account of different types of ointment bases **07**
- (b) (i). Write down the different characteristics by which microbes are classified **05**
- (ii). What are the physical conditions needed for microbes to grow.? **02**

OR

- Q.5** (a) (i). Which are the different types of light microscope and write the function of each. **05**
- (ii). Differentiate between: minimal and differential media **02**
- (b) (i). Differentiate between: Positive and negative staining **02**
- (ii). Explain preformulation and which are the different preformulation characteristics? Explain each. **05**
