Seat No.: _____ Enrolment No._____

# GUJARAT TECHNOLOGICAL UNIVERSITY

**B. Pharm. – SEMESTER – VI • EXAMINATION – WINTER • 2016**

**Subject Code: 2260002 Date: 21-10-2016**

**Subject Name: Pharmaceutical Microbiology and Biotechnology - II**

**Time: 02:30 pm - 05:30 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)** | Explain the scope of microbial genetics in pharmaceuticals. | **06** |
| | **(b)** | Write a note on mutagenic agents. | **05** |
| | **(c)** | Differentiate transduction and transformation. | **05** |
| **Q.2** | **(a)** | Write a note on applications of monoclonal antibodies and gene cloning. | **06** |
| | **(b)** | Write a note on streptokinase. | **05** |
| | **(c)** | Explain growth promotion test. | **05** |
| **Q.3** | **(a)** | Write a note on importance of analytical microbiology in pharmaceuticals. | **06** |
| | **(b)** | How do you carried out sterility testing for Iodex and sulphacetamide sodium eye drops. | **05** |
| | **(c)** | Write a note on microbiological assay of cyanocobalamine as per I.P. | **05** |
| **Q.4** | **(a)** | Describe the method of preparation, standardization and storage of BCG. | **06** |
| | **(b)** | Classify immunity and immunological preparations in detail. | **05** |
| | **(c)** | Enlist antigen-antibody interactions.write in detail any one. | **05** |
| **Q.5** | **(a)** | Enlist different diagnostic tests involved with immunological principle. Write a note on any one. | **06** |
| | **(b)** | Differentiate vaccine and sera. | **05** |
| | **(c)** | Write a note on whole human blood and its storage. | **05** |
| **Q. 6** | **(a)** | Draw neat and labeled diagram of ideal fermentor with role of each part. | **06** |
| | **(b)** | List out the requirements for ideal plasma substitutes. | **05** |
| | **(c)** | How the organisms for fermentation are isolated, cultivated, screened and preserve? | **05** |
| **Q.7** | **(a)** | Give the flow sheet of Penicillin production, isolation and recovery by fermentation. | **06** |
| | **(b)** | Discuss the importance of different parameters for fermentation process. | **05** |
| | **(c)** | What are standard organism required for production of streptomycin, tetracycline, vitamin B12, citric acid and Riboflavin? | **05** |

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