

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM - SEMESTER- 6 EXAMINATION – SUMMER -2019

Subject Code: 2260002

Date: 10-05-2019

Subject Name: Pharmaceutical Microbiology & Biotechnology – II

Time: 02:30 PM TO 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) Classify the mutagenic agents and Describe test for identification of mutagens. | 06 |
| | (b) Write a note on protoplast fusion. | 05 |
| | (c) Define gene cloning. Discuss gene cloning by Restriction endonuclease. | 05 |
| Q.2 | (a) How do you carried out sterility test for Iodex, sulfacetamide eye drops, Penicillin, Talcum powders and surgical dressings. | 06 |
| | (b) Differentiate transformation and transduction. | 05 |
| | (c) Write a note on Hybridoma Technique. | 05 |
| Q.3 | (a) Explain Microbiological test of vitamin B12. | 06 |
| | (b) Discuss the growth promotion test. | 05 |
| | (c) Comments: (i)TAB is a simple monovalent vaccine.(ii) Sub culturing is required in sterility testing of oily injections. | 05 |
| Q.4 | (a) Discuss antigen antibody reactions. | 06 |
| | (b) Write a note on ELISA and Widal Tests. | 05 |
| | (c) Differentiate Humoral and Cellular immunity, Active and passive immunity. | 05 |
| Q.5 | (a) Give examples of Polyvalent vaccine, Toxoid, Attenuated vaccine, viral vaccine, killed vaccine and sera. | 06 |
| | (b) Write a note on immunoglobulins. | 05 |
| | (c) Write a note on streptokinase. | 05 |
| Q. 6 | (a) Write a note on collection, processing and storage of whole human blood. | 06 |
| | (b) Write a note on ideal requirements of plasma substitutes and Dextran. | 05 |
| | (c) Give schematic diagram of production of penicillin V by fermentation. | 05 |
| Q.7 | (a) Give the organisms required for production of Streptomycin, Tetracycline, Citric acid, Vitamin B12, Riboflavin and alcohol. | 06 |
| | (b) Define fermentation. Draw labeled diagram of typical fermentor and give role of different parts of fermentor. | 05 |
| | (c) Discuss control of different parameters during fermentation process. | 05 |
