

Roll No.: _____

Enrolment No. _____

PARUL UNIVERSITY

PARUL INSTITUTE OF PHARMACY

B.PHARM FIFTH SEMESTER · INTERNAL EXAMINATION: 2018-19

Subject Name: Pharmaceutical Biotechnology

Subject Code: 08101303

Time: 10:00 am to 11:30 am

Date: 26/9/18

Total Marks: 25

Instructions:

1. Question 1 is compulsory
2. Attempt any 2 questions from Q.2 to Q.4
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.

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|-----|-----|---|----|
| Q.1 | (a) | Explain the principle behind fermentation technology. | 04 |
| | (b) | Write down the Differences: 1) Active immunity Vs Passive immunity
2) Endotoxin Vs Exotoxin | 03 |
| | (c) | Provide the list of biotech products produced with the r – DNA technology and write the specific use of each product. | 02 |
| Q.2 | (a) | Define r – DNA technology and describe steps involved in cloning technique? | 03 |
| | (b) | What are Restriction Enzymes? Explain the different types of RE enzymes used in cloning? | 03 |
| | (c) | Define following terminology: 1) Auxotroph 2) Transformation 3) F+ x F- conjugation 4) Prophage | 02 |
| Q.3 | (a) | Describe the fermentation production procedures for Benzyl Penicillin and Ethyl Alcohol. | 05 |
| | (b) | Draw a typical diagram of fermenter submerged fermenter and provide list of factors affecting fermenter design. | 03 |
| Q.4 | (a) | What is Hybridoma and how it is used for production of Monoclonal Antibodies. | 05 |
| | (b) | i) Give classification of different Vaccines with example.
ii) Enlist different types of Antigen antibody reactions. | 03 |
