

Seat No.:-----

Enrolment No.:-----

**UKA TARSADIA UNIVERSITY**

Maliba Pharmacy College

B. Pharm 4<sup>th</sup> Semester Internal Examination April 2014 (Mid-Sem)

**030020402- Pharmaceutical Biotechnology**

Time: 10:30 a.m. To 12:30 p.m.

Max. Marks: **40**

Date: 07/04/2014

**Instructions:**

- Attempt any **FIVE** questions.
- Each question carries **08** marks.
- Make suitable assumption whenever necessary.
- Figures to the right indicate full marks.

- |     |    |   |   |
|-----|----|---|---|
| Q.1 | A) | Define: Biotechnology, Microbiological assay, Enzyme immobilization and Mutation.             | 4 |
|     | B) | Explain: Wobble hypothesis and Chargaff's rule.   | 4 |
| Q.2 | A) | i) Write the full form of: ATCC and NCIB.   | 4 |
|     |    | ii) Write principal of Microbiological assay of vitamins.                                     |   |
|     | B) | Write a note on different branches of biotechnology.  | 4 |
| Q.3 | A) | Explain: Missense mutation, nonsense mutation, Silent mutations and Lethal mutation.          | 4 |
|     | B) | Discuss: DNA replication  | 4 |
| Q.4 | A) | i) Explain: Proof-reading function of DNA polymerase III.                                     | 4 |
|     |    | ii) How RNA polymerase differs from DNA polymerase?   |   |
|     | B) | Write a detail note on: Therapeutic application of enzyme immobilization.                     | 4 |
| Q.5 | A) | i) Write operational advantages with enzyme immobilization.                                   | 4 |
|     |    | ii) Explain significance of Km Value on enzyme immobilization.                                |   |
|     | B) | i) Explain: Urea-Urease modulated system.   | 4 |
|     |    | ii) Explain: Glucose oxidase-Glucose modulated system.  |   |
| Q.6 | A) | Explain: Factors affecting enzyme kinetics in enzyme immobilization.                          | 4 |
|     | B) | Discuss flow sheet for Penicillin or Vitamin B <sub>12</sub> production through fermentation. | 4 |
| Q.7 | A) | i) Explain the term: Phenotypic and Genotypic variation                                       | 4 |
|     |    | ii) Explain: Enzyme electrode as Bio sensors.   |   |
|     | B) | Write a detail note on: Microbiological assay of antibiotics by Two-level assay method.       | 4 |