

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**M. Ph. II SEMESTER • EXAMINATION – SUMMER -2018****Subject Code: MRA202T****Date: 16/05/2018****Subject Name: REGULATORY ASPECTS OF HERBAL AND BIOLOGICALS****Time: 10:30AM TO 01:30PM****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) Differentiate Biosimilars drugs with Generic drugs.  | 06 |
|     | (b) Write a note on toxicological studies as per CDSCO.  | 05 |
|     | (c) Define: a) Sponsor                      b) LR (Legal Representative)   | 05 |
| Q.2 | (a) Discuss various phases for clinical development for Biosimilars.   | 06 |
|     | (b) Discuss Good agricultural and collection practice for starting materials of herbal origin as per EU.   | 05 |
|     | (c) What are TSE (Transmissible Spongiform Encephalopathy)? Write a note on diagnostic tests to detect TSE.  | 05 |
| Q.3 | (a) Discuss Guidelines for the Scientific Data Requirements for Plasma Master as per EU.   | 06 |
|     | (b) Write general requirements for A 351(k) application for Biosimilars as per USA.  | 05 |
|     | (c) Write a note on Pharmacovigilance study as per CDSCO.  | 05 |
| Q.4 | (a) Describe labelling and packing requirements for Biologics.   | 06 |
|     | (b) Write a note on Assessment of clinical safety and efficacy in the preparation of EU herbal monographs for well-established and traditional herbal medicinal products.  | 05 |
|     | (c) Discuss the Industry guidance for Characterization and Qualification of Cell Substrates and Other Biological Materials Used in the Production of Viral Vaccines for Infectious Disease Indications as per USFDA. | 05 |
| Q.5 | (a) Write a note on Content of BLA (Biologics License Applications).   | 06 |
|     | (b) Write briefly about Post-Market Data for Similar Biologics.  | 05 |
|     | (c) Discuss the role and responsibilities of ISBT.   | 05 |
| Q.6 | (a) Discuss ICH Q5C guidelines on Quality of Biotechnological Products: Stability Testing of Biotechnological/Biological Products.   | 06 |
|     | (b) Discuss Schedule T for GMP requirements of herbal medicine in INDIA.   | 05 |
|     | (c) Discuss the Choice of Reference Product for Biosimilars.   | 05 |
| Q.7 | (a) Write a note on Principles for Development of Similar Biologics as per CDSCO.  | 06 |
|     | (b) Discuss standardization and quality evaluation of herbal products.   | 05 |
|     | (c) Discuss Good Agriculture and Collection Practices guideline as per AHPA.   | 05 |

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