

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM - SEMESTER- 6 EXAMINATION – SUMMER -2020

Subject Code: BP604TT**Date: 29-10-2020****Subject Name: Biopharmaceutics and Pharmacokinetics****Time: 10:30 AM TO 1:30 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) | Define drug absorption. Discuss the various factors influencing GI absorption of a drug. | 06 |
| | (b) | Explain briefly about different mechanism of drug Absorption. | 05 |
| | (c) | Discuss factors affecting Protein-Drug binding. | 05 |
| Q.2 | (a) | Write a note on methods to enhance the bioavailability through enhancement of dissolution rate. | 06 |
| | (b) | Define Bioavailability. Explain various methods used for determination of Bioavailability. | 05 |
| | (c) | Write a short note on IVIVC | 05 |
| Q.3 | (a) | Discuss Relative Bioavailability and absolute bioavailability | 06 |
| | (b) | Discuss causes of non-linearity with example. | 05 |
| | (c) | Write note on Apparent volume of distribution and its significance. | 05 |
| Q.4 | (a) | Discuss in brief about calculation of loading dose and maintenance dose | 06 |
| | (b) | Explain briefly the two compartmental open model extra vascular administrations. | 05 |
| | (c) | Write factors affecting renal excretion of drugs. | 05 |
| Q.5 | (a) | Write a brief note on pharmacokinetics. | 06 |
| | (b) | Write a brief note on physiological models. | 05 |
| | (c) | Discuss clinical significance of Protein binding of drugs | 05 |
| Q.6 | (a) | Explain the factors affecting drug dissolution and dissolution rate. | 06 |
| | (b) | Write the merits and demerits of non compartmental pharmacokinetics. | 05 |
| | (c) | Describe open one compartment model IV bolus administration. | 05 |
| Q.7 | (a) | Explain briefly Michaelis – Menton method for estimation of K_m and V_{max} . | 06 |
| | (b) | Differentiate bioavailability and bioequivalence | 05 |
| | (c) | Discuss protocol of bioequivalence study. | 05 |
