

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. - SEMESTER-8 • EXAMINATION – SUMMER -2018

Subject Code: 280004**Date: 04/05/2018****Subject Name: Pharmaceutical Analysis-IV****Time: 10:30 AM TO 01:30 PM****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Define Validation? Enlist the analytical method validation parameter. Write in detail about any two validation parameters as per ICH guideline. **06**
- (b) Give brief note on GATT and TRIPS. **05**
- (c) Write short note on Good Laboratory Practice (GLP). **05**
- Q.2** (a) How X-rays radiations are generated? Describe applications of X-ray diffraction. **06**
- (b) Explain the principle and applications of Nephelometry **05**
- (c) Define Bragg's law and explain it in detail. **05**
- Q.3** (a) Explain the principle, instrumentation and applications of super critical fluid Chromatography. **06**
- (b) Discuss detectors used in HPLC. **05**
- (c) Draw the instrumentation of HPLC and discuss in detail. **05**
- Q.4** (a) Draw the instrumentation of GC-MS and discuss in brief about GC-MS. **06**
- (b) Enlist various detectors used in Gas chromatography. Explain FID in detail. **05**
- (c) Explain; Guard columns, C₁₈ column, WCOT and PLOT? **05**
- Q.5** (a) Describe principle, advantage, disadvantage and applications of HPTLC **06**
- (b) What is basic principle of partition chromatography? Write brief note on it. **05**
- (c) Write a short note ion-exchange chromatography. **05**
- Q. 6** (a) Discuss basic principle of Raman spectroscopy in detail. Write applications of it. **06**
- (b) What is IPR? What are basic criteria for patentability? Explain it. **05**
- (c) Write comparison of HPLC vs GC. **05**
- Q.7** (a) What are the different instruments used for measurement of radioactivity? Give a brief account of them. **06**
- (b) Describe liquid scintillation system for radionuclide. Write applications of Radio nuclides. **05**
- (c) Give a brief account on ELISA technique. **05**
