

GUJARAT TECHNOLOGICAL UNIVERSITY
B. E. - SEMESTER – VI • EXAMINATION – WINTER 2012

Subject code: 160302**Date: 03/01/2013****Subject Name: Analytical & Optical Instrumentation****Time: 02.30 pm - 05.00 pm****Total Marks: 70****Instructions:**

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

- Q.1** (a) Explain the block diagram, principle and uses of Spectrophotometer. **07**
(b) Explain the block diagram principle and uses of Pulse-Oxymetry. **07**

- Q.2** (a) Explain principle and block diagram of Coulter Counter. **07**
(b) Explain the HPLC. **07**

OR

- (b) Explain the block diagram principle and uses of Gas Chromatography. **07**

- Q.3** (a) Explain the optical system used in Compound Light Microscope with Diagram. **07**
(b) Explain the enzymatic methods used in Strip Test for Blood Glucose Level measurement. **07**

OR

- Q.3** (a) Explain the principle of Scanning electron microscope with diagram. **07**
(b) Explain Sandwich Elisa With Labeled Step wise Diagram. **07**

- Q.4** (a) Explain Blood Gas Analyzer. **07**
(b) Write short notes on Autoclave & Anaerobic Apparatus. **07**

OR

- Q.4** (a) Explain the block diagram principle and uses of Electrophoresis. **07**
Q.4 (b) Write short notes on Monochromator & Glass Electrode. **07**

- Q.5** (a) Explain the block diagram of Auto analysis instrument. **07**
(b) Write short notes on Blood Bank & Microtome. **07**

OR

- Q.5** (a) Explain the block diagram principle and uses of Flame photometry. **07**
(b) Write short note on Capnography & Endoscope. **07**
