

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (OLD) - EXAMINATION – SUMMER 2017****Subject Code: 160302****Date: 08/05/2017****Subject Name: Analytical & Optical Instrumentation****Time: 10:30 AM to 01:00 PM****Total Marks: 70****Instructions:**

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

- Q.1** (a) Enlist and explain various methods of blood cell counting. **07**
(b) Write a short note on Spectrophotometry. **07**
- Q.2** (a) Write a technical note on hot air oven. **07**
(b) Illustrate the methodology of Gel Electrophoresis. **07**
- OR**
- (b) Illustrate the methodology & instrumentation for blood glucose measurement. **07**
- Q.3** (a) Explain the components of proximal & distal tip of the endoscope. **07**
(b) Briefly describe the gas chromatography. **07**
- OR**
- Q.3** (a) Draw and illustrate the structure of pH electrode. **07**
(b) Describe the instrumentation of Blood Gas Analyzers. **07**
- Q.4** (a) Explain the types of ELISA with necessary diagrams. **07**
(b) Write a brief note on autoclaves. **07**
- OR**
- Q.4** (a) Explain the instrumentation of simple & compound microscopy. Discuss the methods to enhance the quality of magnification. **07**
Q.4 (b) Write a brief note on incubators. **07**
- Q.5** (a) What is Capnography? Describe the applications of Capnography in OT. **07**
(b) Explain the blood banking procedure with appropriate diagrams. **07**
- OR**
- Q.5** (a) Write a technical note on flame photometer. **07**
(b) Explain beer-lambert's law. Explain the instrumentation of Pulse-oxymeter. **07**
