

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VI (OLD) - EXAMINATION – SUMMER 2018****Subject Code:162303****Date:28/04/2018****Subject Name:Plastic Process Instrumentation and Process Control****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) Explain the block diagram of Instrumentation process with neat sketch. **07**  
(b) Explain various static characteristics of an instrument in brief. **07**
- Q.2** (a) Explain diaphragm pressure transducer with neat diagram. **07**  
(b) Describe the advantages and disadvantages of filled system thermometer with neat sketch. **07**
- OR**
- (b) What are different methods of temperature measurement? Explain about resistance thermometer. **07**
- Q.3** (a) Explain closed loop control system with neat diagram. **07**  
(b) Write a short note on thermocouples. **07**
- OR**
- Q.3** (a) Explain radiation pyrometer with neat diagram. **07**  
(b) Explain LVDT with neat diagram. **07**
- Q.4** (a) Explain Open loop control system with neat diagram. **07**  
(b) Explain Proportional, Integral & Derivative controllers. **07**
- OR**
- Q.4** (a) Explain Closed loop control system with neat diagram. **07**  
(b) Explain PI, PD & PID controllers. **07**
- Q.5** (a) Explain feed forward control system. **07**  
(b) Explain manometers. **07**
- OR**
- Q.5** (a) What are different parts of Injection molding machine? Explain its functions. **07**  
(b) Write a short note on dynamic characteristics of instrument system **07**

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