Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

M.Tech S1 (R,S) Exam Dec 2020

Cluster: **Kollam**
Branch: **Electrical and Electronics Engineering**
Specialisation: Industrial Instrumentation and Control

02EE6121 PROCESS DYNAMICS AND CONTROL

Time: 3 Hrs   Max. Marks: 60

PART A
*(Answer **All** Questions)*

1. List the necessity for modeling of dynamic systems in a process industry.

2. Develop the dynamic model for a Chemical Reactor control system.

3. Explain Zeigler Nichols Closed loop tuning technique of controllers.

4. Explain transmitters used in process instrumentation.   **(4 x 9=36)**

PART B
*(Answer **Any Two** from each question)*

5. (a) Explain with schematic diagram Direct Digital Control (DDC) for a process control industry.

 (b) Explain with neat block diagram Data Acquisition System.

 (c) Explain with schematic diagram Supervisory control for a process control industry.

6. (a) List the important characteristics of a control loop.

 (b) Explain Internal model controller used for the control of a process model.

 (c) Explain typical measuring device used for a temperature and pressure process control.

                                                            (2 x 12=24)

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