Printed Pages: 01 **Sub Code:KOE092**

Paper Id: 236031 **Roll No.** | | | | | | | | | | |

B. TECH.
(SEM VIII) THEORY EXAMINATION 2022-23
COMPUTERIZED PROCESS CONTROL

Time: 3 Hours ***Total Marks: 100***

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **2 x 10 = 20**

(a) Explain the role of computers in process control.
(b) Explain Communication Networking in brief.
(c) Explain the elements of a computer aided process control system.
(d) Draw the ISO Reference Model for communication.
(e) Explain the need of modelling of the system.
(f) Define Goal.
(g) Explain the applications of statistical Control.
(h) Explain the advantages of Computerized Process Control.
(i) Explain the challenges faced in Electric oven temperature control.
(j) Explain the limitations of Cascade Control.

SECTION B

2. Attempt any *three* of the following: **10 x 3 = 30**

(a) Describe the classification of Computer Aided process control system.
(b) Explain the data transfer techniques in detail.
(c) Describe Process Model and Physical Model.
(d) Describe the Predictive Control and Adaptive Control in detail.
(e) Explain Reheat Furnace temperature control in detail.

SECTION C

3. Attempt any *one* part of the following: **10 x 1 = 10**

(a) Describe the architecture of Computer Aided process control system.
(b) Discuss the different types of Process related Interfaces in Control System.

4. Attempt any *one* part of the following: **10 x 1 = 10**

(a) Explain the Real time Operating System in detail.
(b) Discuss the types of Computer Control Process Software.

5. Attempt any *one* part of the following: **10 x 1 = 10**

(a) Define modelling and the various steps needed in modelling procedure of a system.
(b) Differentiate between Physical Model and Control Model.

6. Attempt any *one* part of the following: **10 x 1 = 10**

(a) Explain Statistical Control and Intelligent Control in detail.
(b) Discuss Inferential Control and Cascade Control in detail.

7. Attempt any *one* part of the following: **10 x 1 = 10**

(a) Describe the Computer Aided control of electric power generation plant.
(b) Discuss thickness and flatness control system for metal rolling.

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