PAPER ID-310469

Subject Code: NIC703

Roll No: | | | | | | | | | | | | | |

B.TECH
(SEM VII) THEORY EXAMINATION 2020-21
COMPUTERISED PROCESS CONTROL

Time: 3 Hours ***Total Marks: 70***

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 7 = 14

a.	What is the difference between Analog Interfaces & Digital Interfaces?
b.	Define Communication Networking.
c.	Give two differences between Physical model & Control Model.
d.	What is batch control process?
e.	Write two Benefits of using Computers in a Process control.
f.	Give two examples of Computerized Process Control.
g.	Define Pulse Interfaces & Standard Interfaces.

SECTION B

2. Attempt any *three* of the following: 7 x 3 = 21

a.	What are the different Elements of a Computer Aided Process control System? Explain it.
b.	Describe **Industrial communication System** in detail.
c.	What is Physical model & Process model? Explain in detail.
d.	Write a short note on (i) Inferential control, (ii) Intelligent Control & (iii) Statistical control.
e.	Discuss Computer-Aided control of **Electric Power Generation Plant** in detail.

SECTION C

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

(a)	Explain in detail Centralized Control Systems & Distributed control Systems.
(b)	Describe Classification of a Computer –Aided Process Control System.

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

(a)	Explain Real Time Operating System in detail.
(b)	Discuss Data Transfer Techniques with diagram.

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

(a)	What is Model Validation? Also Discuss Model Formulation in detail.
(b)	Describe Control Model & Process modeling.

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

(a)	How Advanced Strategies for Computerised Process control is benefitted?
(b)	Write a short note on (i) Cascade Control, (ii)Predictive control, (iii)Adaptive Control.

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

(a)	What are the different examples of Computerized Process Control? Explain it.
(b)	Explain in detail Thickness and Flatness control System for metal Rolling.