Name: **Enrolment No:**	UPES UNIVERSITY WITH A PURPOSE

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
Online Examination, December, 2020

Course: Distributed Control System **Semester: VII**
Program: B.Tech- Mechatronics **Time: 03 hrs.**
Course Code: MECH4002 **Max. Marks: 100**

Instructions: Attempt all the questions.

S. No.		Marks	CO
	SECTION A		
Q 1	List the functions of the Intermediate stations in Distributed control systems.	**5**	**CO1**
Q 2	Classify the different types controller used in field station of Distributed control system.	**5**	**CO1**
Q 3	List the characteristics of the process oriented programming languages	**5**	**CO2**
Q 4	Differentiate the general structure and kernel structure of real time operating system.	**5**	**CO2**
Q5	Define the term state observer.	**5**	**CO3**
Q6	Define the reliability and availability of multi computer systems.	**5**	**CO4**
	SECTION B		
Q1	Explain the characteristic of the Higher level programming Languages	**10**	**CO2**
Q2	Discuss about the possible components of a system software in distributed control system.	**10**	**CO2**
Q3	Explain the application of majority of Voting technique in DCCS reliability.	**10**	**CO3**
Q4	Discuss about the transmission media. Explain different data transmission techniques	**10**	**CO3**
Q5	Discuss the reliability design guidelines for distributed control system.	**10**	**CO4**
	SECTION-C		
Q1	Explain the integrated control system and design integrated control system for a steel plant **OR** Design the distributed control system for sintering plant control.	**20**	**CO4**