UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2019

Course: B tech Mechatronics Engg **Semester: VIII**
Program: Theory of automation **Time 03 hrs.**
Course Code: Mech4003 **Max. Marks: 100**

Instructions:

S. No.	SECTION A	Marks	CO
Q 1	Discuss briefly the applications of industrial automation.	5	CO5
Q 2	Differentiate between inline and rotary type of automated flow lines.	5	CO3
Q 3	Enlist on the significance of buffer storage during assembly system.	5	CO3
Q 4	State the importance of RFID technology in material handling.	5	CO5
	SECTION B		
Q 5	State and explain various data need to be collected for measuring performance of automated industry.	10	CO5
Q 6	What type of control response is required during industrial automation? Explain the use of PID controller with example.	10	CO2
Q 7	Explain the system configuration for parts delivery at work stations and its industrial applications.	10	CO4
Q 8	Contrast on the use of group technology pertaining to industrial production system. OR Focus on the importance of cellular manufacturing and its codification in industries with an example	10	CO4
	SECTION-C		
Q 9	"Rail-guided systems are generally considered to be more versatile than conveyor systems, but less versatile than AGVS". Contrast and Illustrate on the statement with any industrial example.	20	CO1
	Explain the use of flexible manufacturing system in achieving the industrial agility environment with the help of real time industrial example. Also suggest the	20	

Q 10	modifications/changes you would like to suggest to incorporate into the plant . OR Suppose you are asked to monitor, surveillance, control the process for its uninterrupted functioning and to maintain stability of an automated industry where you are doing your internship, explain how you can be able to achieve the same with an example.What are the facilities you would like to incorporate into the existing plant?		