

Name:  
Enrolment No:



**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES  
END SEMESTER EXAM, JULY 2020**

**Course: Process Dynamics Control and Instrumentation**  
**Program: B. TECH APE GAS**  
**Course Code: CHCE 3007**

**Semester: VI**

**Max. Marks: 100**

**NOTE: ATTEMPT ALL**

1. The characteristic equation is given by  
 $s^5 + s^4 + 3s^3 + 3s^2 + 15s + 10 = 0$   
Determine the number of roots having positive real part. [15] CO3&CO4
2. Explain all the dynamic characteristics of an instrument with the help of suitable examples.[15] CO5
3. With the help of an example explain the difference between feedforward and feed backward control system.[15] CO1&CO2
4. List out the various types of error in measurement and explain any one with the help of an example.[15]CO5
5. Explain with the help of diagram the construction, working, advantage, disadvantage of anyone pressure measuring devices. [20] CO5
6. Classify various temperature measuring devices and explain any one with suitable diagram.[20] CO5

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