Registration Number:

PSNA College of Engineering and Technology

Department of Electrical and Electronics Engineering

SERIAL TEST-2

Industrial Control Electronics

Year/Sem : I/II Max.Marks:50

Staff In-charge: **M.Kaliamoorthy**

Part A (9 * 2 = 18)

Answer any **NINE** questions

- 1. Define Automation
- 2. Define Control and Differentiate automated systems and control systems.
- 3. What you want to control is not equal to what you can control Justify this statement with an example.
- 4. Differentiate open loop control system with closed loop control system
- 5. What are the different types of analog controllers?
- 6. Draw the basic circuit diagram for Difference amplifier using op-amp with necessary equations.
- 7. Draw the basic circuit diagram for inverting summer using op-amp with necessary equations.
- 8. Draw the responses of controllers for proportional action, Integral action and Derivative action
- 9. Define Dead band.
- 10. Draw the responses of controllers for Proportional derivative action, Proportional Integral action and Proportional Integral and derivative actions.

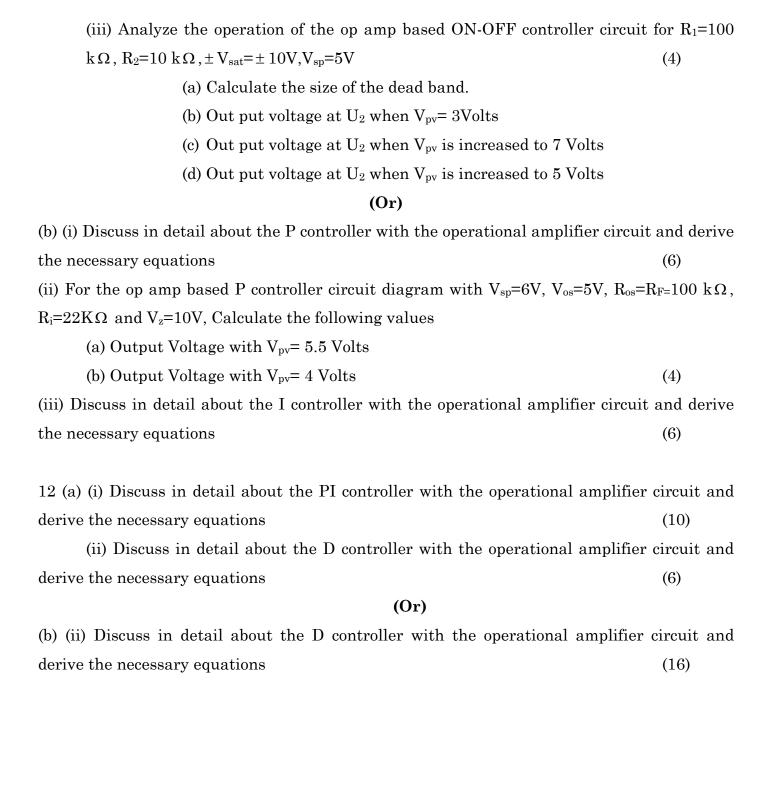
Part B (2 *16 = 32)

Answer ALL questions

- 11.(a) (i) Discuss in detail about the op amp circuit based Error amplifiers (Differential Amplifier and Inverting Summer). (6)
 - (ii) Discuss in detail about the ON-OFF controller with an example. Also construct the operational amplifier circuit for ON-OFF controller and derive the necessary equations

(6)

Time: 1.5 Hrs



HOD/EEE

Staff in charge