



UNIT - II

2 (a) Explain the working of Linear variable differential transducer (LVDT) with suitable diagram.

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(b) Explain the working principle of pneumatic and hydraulic actuator with diagram.

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OR

2 (a) Write a brief introduction of actuator. Write its applications.

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(b) Define the following term :

(i) Hall effect sensor

(ii) Proximity sensor

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UNIT - III

3 (a) What is the role of control in Mechatronics ? Explain in detail.

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(b) Explain the principle of operation of the variable reluctance stepper motor.

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OR

3 (a) How can you define design optimization of mechatronics system ?

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(b) Explain continuous and discrete time signals.

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## UNIT - IV

- 4 (a) Define "Data Acquisition" system in mechatronics. 6
- (b) Define the following terms :
- (i) Quantizing theory
- (ii) Digital to Analogue Converter (DAC) 10

OR

- 4 (a) Explain the role of Data Loggers (DL) and computer with plug in board in data acquisition system. 8
- (b) Explain Analogue to digital converter (ADC). 8

## UNIT - V

- 5 How can you define elevators and escalator, their working, also show the role of mechatronics. 16

OR

- 5 Explain any two mechatronic systems with suitable diagrams.
- (a) Engine Management system
- (b) Automatic Camera
- (c) Automatic Washing Machine. 16