

PART B — (5 × 16 = 80 marks)

11. (a) Explain the static and dynamic characteristics of transducers.

Or

- (b) (i) Explain the principles and working of Hall Effect Sensor. (8)
(ii) What are the basic elements of a closed loop system? Explain. (8)
12. (a) Explain with neat sketch the architecture of 8085 microprocessor.

Or

- (b) Write short notes on :
- (i) Addressing modes. (8)
(ii) Instruction set of 8085 microprocessor. (8)
13. (a) Explain with neat sketch microprocessor based temperature control system by using 8255PPI.

Or

- (b) Explain with neat sketch microprocessor based stepper motor control system by using 8255PPI.
14. (a) Explain the architecture of a PLC and explain about its elements.

Or

- (b) Write short notes on PLC for the following :
- (i) Data Movement
(ii) Data Comparison.
15. (a) What are the roles of sensors in car engine management system? Explain with a block diagram.

Or

- (b) Design a robot to pick and place the object and comment on the various elements in the system.