

PART B — (5 × 16 = 80 marks)

11. (a) (i) Draw and explain minimum mode system configuration of 8086 microprocessor. (8)
(ii) Briefly explain the architectural advancements of microprocessors. (8)

Or

- (b) With a neat diagram explain the bus interfacing unit and execution unit available in 8086 microprocessor. (16)
12. (a) Briefly explain the addressing modes of 8086 with example. (16)

Or

- (b) (i) Briefly explain the arithmetic group of instructions available in 8086 microprocessor. (8)
(ii) Briefly explain the assembler directives of 8086. (8)
13. (a) With a neat block diagram explain the key board and display controller IC 8279. (16)

Or

- (b) (i) With a neat block diagram explain programmable interval IC 8253. (8)
(ii) Briefly explain the method of interfacing A-to-D converter with microcontroller. (8)
14. (a) Explain in detail the memory organization of 8051 microcontroller. (16)

Or

- (b) (i) Briefly explain the data transfer instructions available in 8051 microcontroller. (8)
(ii) Using timers in 8051 write a program to generate square wave of 100 ms, 50% duty cycle. (8)
15. (a) (i) With a neat diagram explain washing machine control using microcontroller. (8)
(ii) With a diagram explain the DC motor control using 8051 microcontroller. (8)

Or

- (b) (i) Explain stepper motor control using 8051 microcontroller. (8)
(ii) With a neat diagram explain the RTC interfacing using 12C standard. (8)