Answer all questions from Part A.
Answer any five questions from Part B.

Part A – (Marks: 25)

1. What are the advantages of segmentation in 8086?
2. What is the purpose of Queue in the BIU of 8086?
3. What are the conditional flags of 8086 microprocessor?
4. Explain the difference between Jump and CALL instructions.
5. What is EQU assembler directive and give suitable example.
6. Write a control word to make all the Ports are input Ports (intel 8255).
7. What is the difference between procedure and Macros?
8. Give alternate functions of Port 3 of 8051.
9. Compare microprocessor and microcontroller.
10. What are the interrupt resources?

Part B – (Marks: 50)

11. (a) Draw the internal architecture of 8086 microprocessor and explain the functions of BIU and EU.
(b) Explain general purpose registers of 8086.

12. (a) Write an ALP in 8086 to determine numbers of even elements and number of odd elements in a given array.
(b) Explain all possible assembler directives creates storage for a byte or group of bytes.
13. (a) Explain command words/mode words of 8255.
(b) Explain different modes of 8255 in detail

14. (a) Draw the pin diagram of 8051 microcontroller and explain pin functions in detail.

15. (a) Explain how array of LED’s are interfaced to 8086 microprocessor through 8255.
(b) Develop an ALP in 8086 to display the LED’s ON and OFF alternatively.

16. (a) What are the different modes of 8051 timers/counters and explain one of the timer mode operation with example.
(b) Explain interrupts of 8051 microcontroller.

17. (a) Discuss memory and I/O interfacing.
(b) Explain different modes of operations of intel 8253.