Reg. No. :

Question Paper Code : 40964

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2018
Fourth/Fifth Semester
Electronics and Communication Engineering
EC 6504 – MICROPROCESSOR AND MICROCONTROLLER
(Common to Biomedical Engineering/Computer Science and Engineering/Medical
Electronics/Information Technology)
(Regulations 2013)

Time : Three Hours   Maximum : 100 Marks

Answer ALL questions

PART – A   (10×2=20 Marks)

1. Define stack pointer.

2. List the various addressing modes of 8086.

3. List two differences between maximum mode and minimum mode configuration of 8086.

4. What is meant by multiprogramming ?

5. Give the various modes of 8254 timer.

6. Write a 16-bit delay program in 8086.

7. Draw the pin diagram of 8051.

8. What are bit manipulation instructions ? Give two examples.

9. What are the types of sensors used for interfacing ?

10. Give the priority level of the interrupt sources in 8051.

PART – B   (5×13=65 Marks)

11. a) Draw and explain the architecture of 8086 with neat diagram.   (13)

(OR)

b) Explain in detail about the interrupts and interrupt service routines of 8086.   (13)

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12. a) Discuss the maximum mode configuration of 8086 with a neat diagram. Mention the functions of various signals. (13)

(OR)

b) Discuss about the multiprocessor configurations of 8086. (13)

13. a) Draw the block diagram and explain the operations of USART. (13)

(OR)

b) Explain in detail about DMA controller. (13)

14. a) Explain the architecture of 8051 with a neat diagram. (13)

(OR)

b) Discuss on the different addressing modes of 8051 with suitable examples. (13)

15. a) Describe the different modes of operation of timers/counters in 8051 with its associated registers. (13)

(OR)

b) Draw the diagram to interface a stepper motor with 8051 microcontroller and write an ALP to run the stepper motor in both forward and reverse direction with delay. (13)

PART – C   (1×15=15 Marks)

16. a) Draw and explain the block diagram of alarm controller. (15)

(OR)

b) Draw the block diagram of traffic light control system using 8086. Write the algorithm and ALP for traffic light control system. (15)

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