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Question Paper Code : 50486

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2017

Fifth/Sixth Semester

Electronics and Instrumentation Engineering

EE 6502 – MICROPROCESSORS AND MICROCONTROLLERS

(Common to : Electronics and Instrumentation Engineering, Instrumentation and Control Engineering, Manufacturing Engineering, Robotics and Automation Engineering)

(Regulations 2013)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

PART – A

(10×2=20 Marks)

1. What are the flags available in 8085 processor ?
2. What are the interrupts available in 8085 ?
3. What are the types of addressing mode in 8085 microprocessor ?
4. Differentiate CALL instruction from JUMP instruction.
5. What are the addressing modes of 8051 microcontroller ?
6. What are the main features of 8051 microcontroller ?
7. Give the difference between maskable and non-maskable interrupts.
8. How is keyboard interfaced with microprocessor ?
9. What is baud rate ?
10. What is duty cycle in PWM ?

PART – B

(5×13=65 Marks)

11. a) Explain with a neat block diagram, the architecture of 8085 microprocessor. (13)

(OR)

- b) i) Describe the interrupts of 8085 microprocessor. (7)
ii) Draw and explain the flag register of 8085 in brief. (6)



12. a) With example, explain the different addressing modes of 8085 and the different types of instruction formats. (13)

(OR)

- b) Explain the operations carried out when 8085 executes the instructions : (13)
- i) MOV A, M (2)
 - ii) XCHG (2)
 - iii) DAD B (2)
 - iv) DAA (3)
 - v) LDA 6000 (2)
 - vi) SHLD 4000. (2)
13. a) i) Draw the data memory structure of 8051 microcontroller and explain. (7)
- ii) Explain with block diagram, how to access external memory devices in an 8051 based system. (6)

(OR)

- b) Discuss in detail, the hardware and software support provided by 8051 for serial communication. (13)
14. a) Draw the block diagram of 8255 (PPI) and explain its various operating modes. (13)

(OR)

- b) With a neat diagram, explain the internal architecture of keyboard and display controller IC-8279. (13)
15. a) Explain with a neat diagram, the closed loop control of servomotor using microcontroller. (13)

(OR)

- b) Explain the different types of instructions set used in 8051 microcontroller. (13)

PART - C

(1×15=15 Marks)

16. a) Explain, the interfacing concept of analog to digital conversion with 8085 microprocessor. (15)

(OR)

- b) With necessary diagram, explain the different modes of operation of 8254, in detail. (15)