Reg. No. : ☐☐☐☐☐☐☐☐☐☐

Question Paper Code: 57101

B.E./B.Tech. DEGREE EXAMINATION, DEC 2020

Fifth Semester

Electrical Engineering

15UEE503 - MICROPROCESSORS AND MICROCONTROLLER PROGRAMMING

(Regulation 2015)

Duration: One hour   Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. ALE stand for_____.   CO1- R

    (a) Address latch enable   (b) Address light enable

    (c) Address lower enable   (d) Address last enable

2. Which of the following is the non-vectored interrupt?   CO1- R

    (a) INTR   (b) TRAP   (c) RST6.5   (d) RST6.6

3. The MSB of a data can be masked by using   CO2- R

    (a) ORI 0FH   (b) XRI 0F H   (c) CPI 0FH   (d) ANI 0FH

4. A microcontroller is having   CO2- R

    (a) Internal memory   (b) Internal ports   (c) 16 data lines   (d) Both a & b

5. After reset, SP register is initialized to address_____.   CO3- R

    (a) 8H   (b) 9H   (c) 7H   (d) 6H

6. Which components are NOT found on chip in a microprocessor   CO3- R
    but may be found on chip in a microcontroller?

    (a) SRAM & USART   (b) EPROM & Ports

    (c) EPROM, USART & Ports   (d) SRAM, EPROM & Ports

7. In 8255A _____ is used for handshaking operation.   CO4- R

    (a) mode 0   (b) mode 1   (c) mode 2   (d) mode 3

8.   8253/54 can be operated in _____ Modes?   CO4- R

(a) 3   (b) 4   (c) 5   (d) 6

9.   The logical instruction that affects the carry flag during its execution is   CO5- R

(a) XRL A   (b) ANL A   (c) ORL A   (d) RLC A

10.   The instruction, ADD A, R7 is an example of   CO5- R

(a) Register instructions   (b) Register specific instructions

(c) Indexed addressing   (d) None of the above

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11.   Illustrate the pin outs of 8085with neat sketch.   CO1- U   (8)

12.   Develop an ALP for (a^2+b^2) using 8085 instructions.   CO2- App   (8)

13.   Discuss   the   internal   memory   organization   of   8051   CO3- U   (8)
      microcontroller.

14.   Interface IC 8255 to microprocessor 8085 with port A address   CO4- App   (8)
      98H and write a program in BSR mode to generate 100 pulses
      at the rate of 200 Hz and duty cycle 40%.

15.   Develop   an   assembly   language   program   to   interface   servo   CO5- App   (8)
      motor with 8051.

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