Reg. No. : | | | | | | | | | | |

Question Paper Code: 55403

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

Fifth Semester

Electronics and Communication Engineering

15UEC503 - MICROPROCESSORS, MICROCONTROLLERS AND APPLICATIONS

(Regulation 2015)

Duration: One hour Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. The microprocessor can read/write 16 bit data from or to _____. CO1- R

   (a) memory (b) I /O device (c) processor (d) register

2. The index register are used to hold _____. CO1- R

   (a) memory register (b) offset address (c) segment memory (d) offset memory

3. TXD(Transmitted Data Output) pin carries serial stream of the transmitted data bits along with _____. CO2- R

   (a) start bit (b) stop bit (c) parity bit (d) all of the mentioned

4. During DMA acknowledgement cycle, CPU relinquishes CO2- R

   (a) Address bus only (b) Address bus & control bus

   (c) Control bus & data bus (d) Data bus & address bus

5. 8051 series has how many 16 bit registers? CO3- R

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

6. Which out of the four ports of 8051 needs a pull-up resistor for using it is as an input or an output port? CO3- R

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

7. What is described by this command: CJNE A,#00001111b, ROW1 CO4- R

(a) it masks the bit and then jumps to the label where ROW1 is written

(b) it makes the value of the accumulator 0FH and then jumps at the address where ROW1 label is written

(c) it compares the value of the accumulator with 0FH and jumps to the location where ROW1 label is there if the value becomes equal

(d) it compares the value of the accumulator with 0FH and jumps to the location where ROW1label is there if the value is not equal

8. In ADC0808/0809 IC which pin is used to select Step Size? CO4- R

(a) Vref (b) Vin (c) Vref/2 & Vin (d) None of the above

9. The AVR is a ----------architecture machine. CO5- R

(a) Harvard (b) Modified Harvard (c) Von Neumann (d) None of the above

10. The operating frequency range of atmega 16 is--------. CO5- R

(a) 0 – 16 MHZ (b) 0 – 8 MHZ (c) 0 – 32 MHZ (d) 0 – 64 MHZ

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11.	Write an assembly language program to find the sum of numbers in an array	CO1-App	(8)
12.	With neat sketch explain the device which is used for serial communication.	CO2-U	(8)
13.	Write an ALP in 8051 to arrange the given set of ‘n’ numbers in ascending order.	CO3-App	(8)
14.	Draw the block diagram of traffic light control system using 8051	CO4-U	(8)
15.	Describe the internal architecture of ATmega 32 AVR microcontroller with neat diagrams	CO5-U	(8)