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

Question Paper Code: 45304

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

Fifth Semester

Electrical and Electronics Engineering

14UEE504 - MICROPROCESSORS AND MICROCONTROLLER PROGRAMMING

(Regulation 2014)

Duration: One hour   Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. _____instruction is used to return to calling program after completing the subroutine sequence

    (a) RST   (b) CALL   (c) RET   (d) TRAP

2. The register in the 8085A that is used to keep track of the memory address of the next op-code to be run in the program is the

    (a) stack pointer   (b) program counter
    (c) ALU   (d) accumulator

3. If *'n'* denotes number of clock cycles and *'T'* denotes period of the clock at which the microprocessor is running, then duration of execution of loop once can be denoted by

    (a) $n+T$ (b) $n-T$ (c) $n*T$ (d) n/T

4. Direction flag is used with

    (a) String instructions   (b) Stack instructions
    (c) Arithmetic instructions   (d) Branch instructions

5. For an interrupt to be served by 8051 microcontroller, it should have duration of

    (a) one machine cycle   (b) three machine cycles
    (c) two machine cycles   (d) four machine cycles

6. The instruction that is used to complement the bit of a bit addressable SFR in 8051 microcontroller is

    (a) CLR C   (b) CPL C   (c) CPL bit   (d) ANL bit

7. The register that maintain an original copy of the respective initial current address register and current word register is

    (a) mode register   (b) base address register
    (c) command register   (d) mask register

8. To save the DAC from negative transients the device connected between OUT1 and OUT2 of AD 7523 is

    (a) p-n junction diode   (b) zener   (c) FET   (d) BJT

9. 8279 is

    (a) PPI   (b) Keyboard, Display interface
    (c) UART   (d) USART

10. keyboard has 8 interface with 8051 has

    (a) Return line scan line   (b) Scan line
    (c) Return line   (d) None of these

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Draw the hardware architecture of 8085 microprocessor and explain the functions of each block.   (8)

12. Explain the five types of addressing modes supported by 8085 instruction set with necessary examples.   (8)

13. Draw the architecture of 8051 microcontroller and explain the functions of each block   (8)

14. Explain the architecture of IC 8259 with a neat diagram.   (8)

15. Write an ALP to find square of a number using 8051 microcontroller instructions.   (8)

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45304