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Question Paper Code: 95402

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2023

Fifth Semester

Electronics and Communication Engineering

19UEC502 - Microprocessors, Microcontrollers & Application

(Regulation 2019)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. The BIU contains FIFO, is the type of ----- CO1- U
(a) stack (b) queue (c) Bus (d) register
2. Which of the following is not a data copy/transfer instruction? CO1- U
(a) MOV (b) PUSH (c) DAS (d) POP
3. 8051 series has how many 16 bit registers? CO1- U
(a) 2 (b) 3 (c) 1 (d) 0
4. The FIFO status word is used to indicate the error in----- CO1- U
(a) keyboard mode (b) keyboard and strobed input mode
(c) strobed input mode (d) scanned sensor matrix mode
5. Arduino IDE consists of 2 functions. What are they? CO1- U
(a) Build () and loop() (b) Setup () and build()
(c) Setup () and loop() (d) Loop () and build()

PART – B (5 x 3= 15 Marks)

6. Find the interrupt to stop the processor. CO2 App
7. If AL=7F, ADD AL,1 find the Status of flag: CY, PF, AF CO2 App

8. If a 12 MHz crystal is connected with 8051, how much is the time taken for the count in timer 0 to get incremented by one? CO2 App
9. Write the control word to operate Port A and Port B as input port in mode 1 configuration. CO2 App
10. Write short notes about microcontroller which is used for building digital devices.. CO1 U

PART – C (5 x 16= 80 Marks)

11. (a) With neat sketch explain the functional components of 8086. CO1 U (16)
- Or
- (b) Draw the minimum mode configuration of 8086 and explain the various devices connected in it. CO1 U (16)
12. (a) (i) Write an Assembly language program to find the Largest number in an array. CO2- App (12)
- (ii) Write an Assembly language program to Mask the LSB content of accumulator. CO2- App (04)
- Or
- (b) Find the output of the following instruction with proper examples: CO2- App (16)
- ROL AL,2
RCL AL,2
SHL BL,2
SAL AL,2
13. (a) With neat sketch explain 8051 microcontroller. CO1- U (16)
- Or
- (b) Describe the function of timer/ counter modes in 8051 with suitable diagram. CO2- U (16)
14. (a) Write an Assembly language program to Port C as Output port and bit set/reset mode in mode 0 of 8255 with 8086. CO2- App (16)
- Or
- (b) Write an Assembly language program to display and rotate the word ECE using 8279. CO2- App (16)

15. (a) Write in detail about Cold fire microprocessor. Compare it with CO4- Ana (16)
8086 microprocessor.

Or

- (b) Compare and contrast the modern tool usage for application CO4- Ana (16)
development with general purpose microprocessor.

