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**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_\_

**End Semester Examination – Nov/Dec - 2016**

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **12EC246** | **Duration :** | **3 hrs** |
| **Sub. Name :** | **Microprocessor and Microcontroller** | **Max. marks :** | **100** |

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| **Q. No.** | | | **Questions** | | | | | **Marks** | | |
| **PART-A(10X1=10 MARKS)** | | | | | | | | | | |
| 1. | | | 8085 is a \_\_\_\_\_\_\_\_\_\_\_ bit processor. | | | | | (1) | | |
| 2. | | | What is the function of program counter? | | | | | (1) | | |
| 3. | | | How many T-states are necessary to perform the following 8085 instruction: MVI B, 40H. | | | | | (1) | | |
| 4. | | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Interrupt of 8085 is Non Maskable. | | | | | (1) | | |
| 5. | | | In peripheral mapped I/O, data bytes are transferred by using \_\_\_\_\_\_\_\_\_\_ instructions. | | | | | (1) | | |
| 6. | | | What happens when the instruction STA 2065H is executed? | | | | | (1) | | |
| 7. | | | 8255 has \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ number of I/O port. | | | | | (1) | | |
| 8. | | | Write down the 8085 instructions used for serial communication. | | | | | (1) | | |
| 9. | | | What is microcontroller? | | | | | (1) | | |
| 10. | | | 8051 has \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ number of counters. | | | | | (1) | | |
| **PART B(5 X 3= 15 MARKS)** | | | | | | | | | | |
| 11. | | | List the flag registers available in 8085. | | | | | | (3) | |
| 12. | | | What is the role of ALE. | | | | | | (3) | |
| 13. | | | Explain the instruction LCALL of 8051. | | | | | | (3) | |
| 14. | | | Explain the operation of **XCHG** instruction. | | | | | | (3) | |
| 15. | | | Write an assembly language program to add two numbers in 8051 microcontroller. | | | | | | (3) | |
| **PART C(5 X 15= 75 MARKS)** | | | | | | | | | |
| 16. | | | |  | With examples explain the various Addressing Modes available in 8085. | | 15 | | |
| (OR) | | | | | | | | | |
| 17. | | | |  | Write an Assembly level language program to find the largest on N numbers. | | 15 | | |
| 18. | | | |  | Draw and explain the timing diagram of the following instructions of 8085 Microprocessor  a. LDA 2050H b. MOV A,C | | 15 | | |
| (OR) | | | | | | | | | |
| 19. | | |  | | Explain the following  Instruction Cycle b. Machine Cycle c. T – States | | 15 | | |
| 20. | | |  | | With relevant diagram explain about 8255. | | 15 | | |
| (OR) | | | | | | | | | |
| 21. | | |  | | Illustrate with relevant diagram, the various blocks involved in the operation of 8051. | | 15 | | |
| 22. | | |  | | Write a simple program in 8051 to find the value of x3, (A+B)2, X\*Y/(2\*A). | |  | | |
| (OR) | | | | | | | | | |
| 23. | | |  | | With relevant diagram explain Stepper motor control using microcontroller. | | 15 | | |
| 24. | | |  | | Explain about the Analog to digital converter ADC0801. | | 15 | | |
| (OR) | | | | | | | | | |
| 25. | | |  | | With relevant diagram explain about the Keyboard and display interface system. | | 15 | | |

ALL THE BEST