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



**End Semester Examination – Nov / Dec – 2019**

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| **Code :** | **14EC2009** | **Duration :** | **3hrs** |
| **Sub. Name :** | **MICROPROCESSOR AND INTERFACING TECHNIQUES** | **Max. Marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Explain the architecture of 8085 microprocessor with a neat block diagram. | CO1 | 14 |
| b. | Calculate the number of T-states for the following instructions:  MVI A,05H  LDA 4300H | CO2 | 6 |
| **(OR)** | | | | |
| 2. | a. | Outline the various addressing modes of 8085 microprocessor. | CO1 | 10 |
| b. | Make use of an ALP to add first 10 numbers. | CO2 | 10 |
|  |  |  |  |  |
| 3. | a. | Design a memory system for the 8085 microprocessor such that it should contain 8Kb of RAM and 8Kb of ROM and give its address map. | CO1 | 15 |
| b. | Design a system for 8085 microprocessor to connect 2 switches and 2 leds. | CO2 | 5 |
| **(OR)** | | | | |
| 4. | a. | Summarize the architecture of 8086 microprocessor with a neat block diagram. | CO1 | 15 |
| b. | MVI C,FF  LOOP : DCR C  JNZ LOOP  Find the execution time for the above delay program. | CO2 | 5 |
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| 5. | a. | Explain in detail the minimum mode and maximum mode of 8085 microprocesor. | CO1 | 10 |
| b. | Explain the concept of memory segmentation in 8086 microprocessor. | CO1 | 10 |
| **(OR)** | | | | |
| 6. |  | Illustrate 8251 USART serial communication with the help of a block diagram. | CO3 | 20 |
|  |  |  |  |  |
| 7. | a. | Explain in detail the 8253 programmable timer with a block diagram and describe its mode of operation. | CO3 | 15 |
| b. | Draw the interface diagram of 8237 – DMA controller with 8085 microprocessor. | CO1 | 5 |
| **(OR)** | | | | |
| 8. | a. | Make use of ALP to arrange the numbers in ascending order [20,10,50,40,30]. | CO2 | 10 |
| b. | Write instructions to generate pulse for every 50µs from counter 0, frequency of 8253 is 2Mhz. | CO2 | 10 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Explain Memory and I/O interfacing in detail. | CO3 | 10 |
| b. | Write 8279 control word format to initialize READ, WRITE and Display FIFO RAM, Keyboard display mode set. | CO3 | 10 |