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

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**End Semester Examination – Nov/Dec – 2018**

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| **Code :** | **10EI207 / 12EI217/EI237** | **Duration :** | **3 hrs** |
| **Sub. Name :** | **MICROPROCESSORS AND MICROCONTROLLERS** | **Max. marks :** | **100** |

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| **Q. No.** | **Questions** | **Marks** |
| **PART-A(10X1=10 MARKS)** | | |
| 1. | How many flags are there in 8085 architecture? | 1 |
| 2. | Define Instruction cycle. | 1 |
| 3. | What is the purpose of an ALE signal? | 1 |
| 4. | What is meant by an addressing mode? | 1 |
| 5. | How many ports in 8255? | 1 |
| 6. | List the two modes of operation of 8255 Programmable Peripheral Interface | 1 |
| 7. | Define OUT 8-bit port address instruction | 1 |
| 8. | How many bytes of internal RAM and ROM supported by 8051 micro controller? | 1 |
| 9. | What are the advantages of a microcontroller over a microprocessor? | 1 |
| 10. | Define port. | 1 |

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| **PART B(5 X 3= 15 MARKS)** | | |
| 11. | Describe PUSH and POP instruction. | 3 |
| 12. | Discuss the addressing modes of 8085 with suitable examples. | 3 |
| 13. | Sketch a simple block diagram to interface an I/O device with a microprocessor. | 3 |
| 14. | Give the differences between Timer and Counter | 3 |
| 15. | List the differences between microprocessor and microcontrollers. | 3 |

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| **PART C(5 X 15= 75 MARKS)** | | | |
| 16. |  | Describe about the architecture of 8085 Microprocessor and its functional blocks in  detail with diagram. | 15 |
| (OR) | | | |
| 17. |  | Explain about opcode fetch, memory read and memory write machine cycle with Timing diagram. | 15 |
| 18. |  | Discuss the classification of instruction set in 8085. Explain each with an example. | 15 |
| (OR) | | | |
| 19. |  | With a neat diagram explain the architecture of 8086 microprocessor. | 15 |
| 20. |  | Draw the block diagram of programmable peripheral interface 8255 and discuss the modes of operation with control words. | 15 |
| (OR) | | | |
| 21. | a. | Explain in detail about Stepper Motor control using 8085 | 8 |
| b. | Explain how ADC 0801 is interfaced with 8085 microprocessor. | 7 |
| 22. |  | Draw and explain the architecture of 8051 Microcontroller. | 15 |
| (OR) | | | |
| 23. |  | With a neat block diagram, explain the operation of a DMA controller. | 15 |
| 24. |  | With a neat diagram, explain the keyboard interfacing with 8051 Microcontroller. | 15 |
| (OR) | | | |
| 25. |  | Elaborate on Interrupts. What are the various types of Interrupts in 8051? Discuss with an example. | 15 |