**18EC503**

**Hall Ticket Number:**

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| **III/IV B.Tech (Regular / Supplementary) DEGREE EXAMINATION** | | | |
| **January, 2022** | **Electronics and Communication Engineering** | | |
| **Fifth Semester** | **Microprocessors and Microcontroller** | | |
| **Time:** Three Hours | | **Maximum :** 50 Marks | |
| *Answer Question No.1 compulsorily.* | | | (1X10 = 10 Marks) |
| *Answer ONE question from each unit.* | | | (4X10=40 Marks) |

**1.** Answer all questions (1X10=10 Marks)

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|  | Explain the physical address formation in 8086. |
|  | What is the need of segmentation in 8086 |
|  | What is function of ALE pin. |
|  | List different ways of passing parameter using procedure. |
|  | What is an interrupt and classify them? |
|  | What is 8259 programmable peripheral device |
|  | What is 2-key lockout? |
|  | What is the function of DPTR? |
|  | What is the purpose of SBUF register? |
|  | List the features of 8051. |

**UNIT – I**

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| 2 | Illustrate arithmetic instructions of 8086. | 10M |

**(OR)**

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| 3 | Draw the neat block diagram of 8086 architecture and explain in detail. | 10M |

**UNIT – II**

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| 4 | 1. Explain assembly language program development tools. 2. Describe the interrupt handling mechanism in 8086 | 5M  5M |

**(OR)**

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| 5. | a. Compare procedures and macros. | 4M |
|  | b. Write an assembly language program to convert BCD to Binary. | 6M |

**UNIT – III**

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| 6 | Explain various operating modes of 8255 in detail | 10M |

**(OR)**

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| 7 | With neat block diagram explain the operation of DMA controller. | 10M |

**UNIT – IV**

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| 8 | 1. Describe the pin configuration of 8051. 2. Explain the function of each bit of PSW of 8051 | 6M  4M |

**(OR)**

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| 9 | 1. Explain the addressing modes of 8051 with sufficient examples 2. Write an assembly language program for interfacing stepper motor with 8051. | 5M  5M |

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