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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 :** | **09IT206/12IT207/IT217** | **Duration :** | **3 hrs** |
| **Sub. Name :** | **MICROPROCESSOR AND INTERFACING** | **Max. marks :** | **100** |

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| **Q. No.** | **Questions** | | **Marks** |
| **PART-A(10X1=10 MARKS)** | | | |
| 1. | What is Pipelining? | | (1) |
| 2. | How many address lines and data lines are available in the 8086 microprocessor? | | (1) |
| 3. | What are the two different types of jump operation? | | (1) |
| 4. | Why does the instruction MOV CL,AX ends in an error? | | (1) |
| 5. | What is bus cycle? | | (1) |
| 6. | How minimum mode and maximum mode is selected? | | (1) |
| 7. | What is DMA | | (1) |
| 8. | What are the modes of operation of 8255? | | (1) |
| 9. | How many interrupts are handled by a single 8259IC? | | (1) |
| 10. | What is NMI? | | (1) |
| **PART B(5 X 3= 15 MARKS)** | | | |
| 11. | Explain the segment register and their uses in microprocessor 8086 | | (3) |
| 12. | Differentiate between logical shift and arithmetic shift instructions | | (3) |
| 13. | What is wait state and idle state? | | (3) |
| 14. | What are the modes of operation of 8253? | | (3) |
| 15. | What is cascade mode in 8259 PIC ? | | (3) |
| **PART C(5 X 15= 75 MARKS)** | | | |
| 16. | a. | Draw and discuss the internal architecture of 8086 microprocessor. | (8) |
| b. | Describe the function of status register in 8086 microprocessor. | (7) |
| (OR) | | | |
| 17. | a. | Explain about memory address space and data organization. | (8) |
| b. | Explain the software model of 8086 with the neat diagram. | (7) |
| 18. | a. | Explain and distinguish SUB and CMP instructions. | (5) |
| b. | Explain the various addressing modes of 8086 with examples? | (10) |
| (OR) | | | |
| 19. | a. | Discuss about string and string handling instructions in 8086. | (8) |
| b. | Explain the various rotate instructions with necessary examples. | (7) |
| 20. | a. | Discuss about isolated input/output and memory mapped input/output. | (8) |
| b. | Explain the memory READ bus cycle of 8088 in the minimum mode operation. | (7) |
| (OR) | | | |
| 21. |  | Explain the maximum mode system configuration of 8086 with the neat diagram. | (15) |
| 22. |  | Draw the functional block diagram of 8255 programmable peripheral interface and explain the mode0 and mode1 operations. | (15) |
| (OR) | | | |
| 23. | a. | Explain the internal architecture of 8254 IC. | (8) |
| b. | Write notes on simplex, half duplex and duplex communication links. | (7) |
| 24. | a. | Discuss about the different types of 8086 microprocessor interrupts. | (8) |
| b. | Explain the internal interrupt functions. | (7) |
| (OR) | | | |
| 25. | a. | Draw and discuss the internal architecture of programmable interrupt controller. | (10) |
| b. | Explain the interrupt address pointer table of 8086 microprocessor. | (5) |

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