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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 :** | **09EC235** | **Duration :** | **3 hrs** |
| **Sub. Name :** | **Electronics and Microprocessor** | **Max. marks :** | **100** |

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| **Q.No** | | **Questions** | | | | **Marks** | | |
| **PART-A(10X1=10 MARKS)** | | | | | | | | |
| 1. | Define rectifier. | | | | | (1) | | |
| 2. | Define Ripple factor. | | | | | (1) | | |
| 3. | What is meant by piezoelectric effect? | | | | | (1) | | |
| 4. | A photo diode is normally \_\_\_\_\_\_\_\_   1. Reverse biased (b) Forward biased (c) Neither forward nor reverse biased | | | | | (1) | | |
| 5. | What are Universal gates? Why they are called so? | | | | | (1) | | |
| 6. | Draw the characteristic table for JK FF. | | | | | (1) | | |
| 7. | What is the size of data bus in 8085 microprocessor? | | | | | (1) | | |
| 8. | Mention the flags of 8085. | | | | | (1) | | |
| 9. | Differentiate RAM and ROM. | | | | | (1) | | |
| 10. | How many address lines are needed to access 64K memory? | | | | | (1) | | |
| **PART B(5 X 3= 15 MARKS)** | | | | | | |
| 11. | State Barkhausen criterion. | | | (3) | | |
| 12. | What is a multimeter?. List its Applications. | | | (3) | | |
| 13. | Convert (24.6)10 into Binary Number. | | | (3) | | |
| 14. | What are the registers available in 8085? | | | (3) | | |
| 15. | What is the purpose of DMA? List the signals of 8085 associated with DMA. | | | (3) | | |
| **PART C(5 X 15= 75 MARKS)** | | | | | | | |
| 16. |  | | Explain the operation of a half wave rectifier with a neat circuit diagram and waveform. Also derive the expression for its efficiency. | | 15 | | |
| (OR) | | | | | | | |
| 17. |  | | What are the different classifications of power amplifiers? Describe the operation of a class B push pull amplifier and mention its disadvantages. | | 15 | | |
| 18. |  | | Describe in detail about the working principle of Thermistor. | | 15 | | |
| (OR) | | | | | | | |
| 19. |  | | With the block diagram, discuss the functions of CRO. | | 15 | | |
| 20. |  | | With neat sketches of the logic symbol, explain common logic gates: AND, OR, NOT, NAND and NOR with reference to the truth table. | | 15 | | |
| (OR) | | | | | | | |
| 21. | a. | | With a neat diagram and truth table, explain the operation of a full adder. | | 8 | | |
|  | b. | | Design 4:1 Multiplexer with its truth table. | | 7 | | |
| 22. |  | | With a neat block diagram, explain the architecture of 8085 in detail. | | 15 | | |
| (OR) | | | | | | | |
| 23. | a. | | Discus the different types of addressing modes in 8085 with example. | | 10 | | |
|  | b. | | Write an assembly language program to add two 8 bit numbers and store the result in memory address. | | 5 | | |
| 24. |  | | Discuss the Asynchronous and synchronous data transfer schemes. | | 15 | | |
| (OR) | | | | | | | |
| 25. |  | | Classify and explain in detail about the memory unit. | | 15 | | |

ALL THE BEST