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

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

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| **Code :** | **18EE2003** | **Duration :** | **3hrs** |
| **Sub. Name :** | **ANALOG ELECTRONIC CIRCUITS** | **Max. Marks :** | **100** |

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| **Q. No.** | **Questions** | **Course**  **Outcome** | **Marks** |
| **PART – A (10X1 = 10 MARKS)** | | | |
| 1. | Define cut off voltage. | CO1 | 1 |
| 2. | List the applications of Zener diode. | CO1 | 1 |
| 3. | List the applications of BJT. | CO2 | 1 |
| 4. | Define biasing in transistor. | CO3 | 1 |
| 5. | Differentiate between BJT and MOSFET. | CO3 | 1 |
| 6. | Draw symbol for MOS FET and BJT. | CO5 | 1 |
| 7. | What is CMRR? | CO5 | 1 |
| 8. | List the ideal characteristics of OP-AMP. | CO5 | 1 |
| 9. | Draw VI characteristics of PN junction diode. | CO1 | 1 |
| 10. | What is peak detector? | CO6 | 1 |

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| **PART – B (6 X 3 = 18 MARKS)** | | | |
| 11. | Enumerate the working principle of PN junction diode. | CO1 | 3 |
| 12. | How MOSFET act as a switch? | CO3 | 3 |
| 13. | Explain the need for zero crossing circuit. | CO4 | 3 |
| 14. | Write short note of current mirror. | CO4 | 3 |
| 15. | Explain the working principle of voltage regulator. | CO3 | 3 |
| 16. | Explain how OP-AMP act as voltage follower. | CO2 | 3 |

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| **PART – C (6 X 12 = 72 MARKS)**  **(Answer any five Questions from Q.no 17 to 23. Q.No 24 is a Compulsory Question)** | | | | | |
| 17. | a. | Explain the principle and operation of full wave rectifier with neat wave form. | CO1 | | 8 |
| b. | Explain clipper and clamper circuits. | CO1 | | 4 |
| 18. | a. | Explain the VI characteristics of BJT. Also mention its applications. | CO2 | | 8 |
| b. | Draw small signal modelling of BJT. | CO2 | | 4 |
| 19. |  | Explain the internal structure of MOSFET, also explain its characteristics. | CO3 | | 12 |
| 20. |  | Explain the working of Inverting and non-inverting amplifier. | CO4 | | 12 |
| 21. |  | Explain the working principle of integrator and differential amplifier. | CO4 | | 12 |
| 22. |  | Explain internal structure of operational amplifier. | CO5 | | 12 |
| 23. |  | Explain the working principle of power amplifier. | CO5 | | 12 |
| **Compulsory:** | | | | |  |
| 24. | a. | Explain the principle and working principle of square wave generator. | | CO6 | 6 |
| b. | Explain the principle and working principle of triangular wave generator. | | CO6 | 6 |