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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 :** | **11MT202/12MT210** | **Duration :** | **3 hrs** |
| **Sub. Name :** | **ANALOG ELECTRONICS CIRCUITS - 1** | **Max. marks :** | **100** |

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| **Q. No.** | **Questions** | **Marks** |
| **PART-A(10X1=10 MARKS)** | | |
| 1. | Mention any two combinations in which the transistors can be connected. | (1) |
| 2. | What is a quiescent point? | (1) |
| 3. | To make the transistor work as an amplifier, it is to be biased in the \_\_\_\_\_\_\_\_ region. | (1) |
| 4. | What is a blocking capacitor? | (1) |
| 5. | Explain: Miller Effect. | (1) |
| 6. | Draw the circuit symbol of common-drain amplifier. | (1) |
| 7. | Define: Harmonic Distortion. | (1) |
| 8. | Mention any two properties of Push Pull Class – B type of amplifier. | (1) |
| 9. | What is the application of a rectifier circuit? | (1) |
| 10. | What is the barrier potential for Si diode? | (1) |

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| **PART B(5 X 3= 15 MARKS)** | | |
| 11 | Draw the circuit symbols and explain the difference between a transistor and a diode. | (3) |
| 12 | Mention the General Characteristics of Amplifier. | (3) |
| 13 | Draw the frequency response curve of any amplifier and mention what information can be understood from that. | (3) |
| 14 | Explain: Crossover Distortion. | (3) |
| 15 | What are the two different types of rectifier circuits? What are their differences? | (3) |

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| **PART C(5 X 15= 75 MARKS)** | | |
| 16. | What are different types of Biasing circuits? Explain any 3 of them in detail with a neat diagram. | (15) |
| (OR) | | |
| 17. | Discuss in detail the methods of stabilizing the Q point. | (15) |
| 18. | Draw a typical Common Emitter amplifier and explain the function of each component in it. | (15) |
| (OR) | | |
| 19. | Compare Common base, Common emitter and Common collector configuration across all their parameters. | (15) |
| 20. | What is a decibel? Explain with a neat diagram the significance of Octaves and Decades. | (15) |
| (OR) | | |
| 21. | Discuss in detail with neat diagram the effects of various capacitors on Frequency response. | (15) |
| 22. | Classify the large signal Amplifiers. Explain the various features of Large Signal Amplifiers. | (15) |
| (OR) | | |
| 23. | Discuss in detail about the Harmonic distortion in amplifiers. | (15) |
| 24. | Mention and explain in detail the important characteristics of a Rectifier circuit. | (15) |
| (OR) | | |
| 25. | Draw the basic Half wave and Full wave rectifier circuit and compare their features. | (15) |

ALL THE BEST