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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 :** | **09IT232/12IT210/IT236** | **Duration :** | **3 hrs** |
| **Sub. Name :** | **COMMUNICATION ENGINEERING** | **Max. marks :** | **100** |

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| **Q. No.** | **Questions** | **Marks** |
| **PART-A(10X1=10 MARKS)** | | |
| 1. | Define Modulation Index. | (1) |
| 2. | Define Receiver selectivity. | (1) |
| 3. | The slew rate for a sine wave is maximum at \_\_\_\_\_\_\_\_\_\_\_\_. | (1) |
| 4. | What is the equation for Carson’s rule? | (1) |
| 5. | What is companding? | (1) |
| 6. | Define Error rate. | (1) |
| 7. | What are the limitations of delta modulation? | (1) |
| 8. | Why we need data compression in facsimile? | (1) |
| 9. | Define Modem. | (1) |
| 10. | Define Uplink and Downlink with respect to Satellite communication. | (1) |

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| **PART B(5 X 3= 15 MARKS)** | | |
| 11 | What is the function of RF stage? Why it is called as the front end? | (3) |
| 12 | State the Sampling Theorem. | (3) |
| 13 | Define quadrature modulation. How it differs from other modulation techniques? | (3) |
| 14 | What is footprint? Why is a larger footprint not always better? | (3) |
| 15 | What is Satellite transponder? | (3) |

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| **PART C(5 X 15= 75 MARKS)** | | |
| 16. | Explain the blocks of a superheterodyne receiver and state how it differs from TRF receiver. | (15) |
| (OR) | | |
| 17. | Derive the amplitude modulated wave equation and explain each term with the help of frequency spectrum. | (15) |
| 18. | Discuss in detail about different Wave Propagation modes. | (15) |
| (OR) | | |
| 19. | Discuss about Twisted pair and Coaxial cables. | (15) |
| 20. | With suitable block diagram describe pulse code modulation. | (15) |
| (OR) | | |
| 21. | Explain in detail about QAM Modulation & Demodulation with a neat circuit diagram. | (15) |
| 22. | Describe the different types of modems and discuss its applications. | (15) |
| (OR) | | |
| 23. | Explain the television receiver with neat diagram. | (15) |
| 24. | Explain how satellites are designed. | (15) |
| (OR) | | |
| 25. | Discuss about advanced wireless systems. | (15) |

ALL THE BEST