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

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**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – Nov/Dec - 2016**

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| **Code :** | **10IT201/ 12IT203/ IT242** | **Duration :** | **3 hrs** |
| **Sub. Name :** | **Principles of Mobile Communication** | **Max. Marks :** | **100** |

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| **Q. No.** | **Questions** | **Marks** |
| **PART-A(10X1=10 MARKS)** | | |
| 1. | What is a need of multiplexing in wireless transmission? | (1) |
| 2. | \_\_\_\_\_\_\_\_\_\_\_ are the physical representation of data in wireless communication. | (1) |
| 3. | UMTS stands for \_\_\_\_\_\_\_. | (1) |
| 4. | What is satellite footprint? | (1) |
| 5. | The modulation scheme used in digital audio broadcasting is\_\_\_\_\_\_\_\_\_. | (1) |
| 6. | Bluetooth is also called as ad hoc piconet. True/False | (1) |
| 7. | The merging of mobile wireless communications and ATM technology leads to \_\_\_\_\_\_\_. | (1) |
| 8. | Give an advantage of IPV6 over IPV4 in mobile network. | (1) |
| 9. | TCP or UDP addresses the dedicated applications using \_\_\_\_\_\_\_\_. | (1) |
| 10. | \_\_\_\_\_\_\_ is a stateless application layer protocol used for web applications. | (1) |

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| **PART B(5 X 3= 15 MARKS)** | | |
| 11 | Describe the simplified reference model used to structure wireless communication. | (3) |
| 12 | List application areas of satellite. | (3) |
| 13 | What are the advantages and disadvantages of WLANs compared to wire LAN? | (3) |
| 14 | Define Handover signaling in mobile ATM. | (3) |
| 15 | How UDP differ from TCP. List any 3 classical TCP improvements for mobile networks. | (3) |

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| **PART C(5 X 15= 75 MARKS)** | | | |
| 16. |  | Define Antenna in wireless networks. Elaborate the various types of antennas with their relationship patterns. | (15) |
| (OR) | | | |
| 17. | a. | Discuss Hidden and exposed terminal problem and Near and far terminal problem | (7) |
| b. | Compare SDMA, TDMA, FDMA and CDMA. | (8) |
| 18. |  | With neat diagram discuss the functional architecture of GSM. | (15) |
| (OR) | | | |
| 19. |  | Write short notes on the following: |  |
| a. | Routing, localization in satellite systems. | (10) |
| b. | Handover in satellite systems. | (5) |
| 20. | a. | With neat diagram discuss all the fields of IEEE 802.11 MAC frame. | (8) |
| b. | Compare and contrast infrared and radio transmission | (7) |
| (OR) | | | |
| 21. |  | Compare IEEE 802.11, HiperLAN2, and Bluetooth with regard to their ad-hoc capabilities. Where is the focus of these technologies? | (15) |
| 22. | a. | Discuss the motivations behind WATM network. | (7) |
| b. | Elucidate the WATM generic reference Model. | (8) |
| (OR) | | | |
| 23. |  | With neat diagrams explain the basic configuration and the client initialization of Dynamic Host Configuration Protocol. | (15) |
| 24. | a. | Write various features of mobile TCP. | (5) |
| b. | Give the overview of classical enhancements to TCP for mobility. | (10) |
| (OR) | | | |
| 25. |  | Elucidate the wireless datagram protocol and the Wireless Transport layer security. | (15) |