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



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

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

**End Semester Examination – April/May – 2017**

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| **Code :** | **14EC3015** | **Duration :** | **3hrs** |
| **Sub. Name :** | **SATELLITE COMMUNICATION** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| Q. No. | Sub Div. | Questions | Course  Outcome | Marks |
| 1. | a. | Explicate in detail about orbital perturbation in satellite communication. | CO3 | 15 |
| b. | Enumerate the steps involved in launching satellite in Geostationary orbit. | CO2 | 5 |
| (OR) | | | | |
| 2. | a. | Illustrate the types of orbits in satellite communication stating its merits and demerits. | CO3 | 8 |
| b. | Evaluate the look angles needed for launching the satellite in geostationary orbit. | CO3 | 12 |
|  |  |  |  |  |
| 3. | a. | Describe the ways in which demand assignment may be carried out in an FDMA network. | CO3 | 10 |
|  | b. | Interpret the importance of TDMA in satellite networks. |  | 10 |
| (OR) | | | | |
| 4. |  | Explicate two types of subsystems in satellite communication with neat sketches. | CO1 | 20 |
|  |  |  |  |  |
| 5. |  | Discuss in detail about antennas used in satellite communication | CO1 | 20 |
| (OR) | | | | |
| 6. |  | How do you increase the link system performance? Discuss in detail with its parameters. | CO1 | 20 |
|  |  |  |  |  |
| 7. | a. | Derive an expression for Friis Transmission. | CO2 | 15 |
|  | b. | A satellite TV signal occupies the full transponder bandwidth of 36MHZ, and it must provide C/N ratio at the destination earth station of 22dB.Given that the total transmission losses are 200dB and the destination G/T is 31dB/K, calculate the satellite EIRP required? | CO2 | 5 |
| (OR) | | | | |
| 8. |  | Discuss the types of transponders available for C band Communication. | CO1 | 20 |
|  | | **Compulsory:** |  |  |
| 9. |  | State your perception about Global positioning system and elucidate in detail with necessary diagrams. | CO2 | 20 |

ALL THE BEST