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



**End Semester Examination – Nov/Dec – 2017**

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|  |  |  |  |
| **Code :** | **14EC2050** | **Duration :** | **3hrs** |
| **Sub. Name:** | **BASICS OF 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. |  | List the various types of orbits used in satellite communication. Also explain its significance and characteristics. | CO1 | 20 |
| (OR) | | | | |
| 2. | a. | Appraise on the parameters Range, Azimuth, and elevation angles of satellite. | CO1 | 10 |
| b. | Discuss in detail about frequency band designation and services available in satellite communication. | CO1 | 10 |
|  |  |  |  |  |
| 3. |  | Recall the antennas used in satellite communication with necessary diagrams. | CO2 | 20 |
| (OR) | | | | |
| 4. |  | Sketch the physical structure of a satellite bus. Also distinguish the features between spin and three axis stabilization satellites. | CO1 | 20 |
|  |  |  |  |  |
| 5. | a. | Describe the factors causing transmission impairment in satellite communication. | CO2 | 16 |
|  | b. | Derive the basic link equation for received power | CO3 | 4 |
| (OR) | | | | |
| 6. |  | Write a detailed note on RF propagation mechanism and the characteristics of wave above 3 GHZ and below 3 GHZ. | CO2 | 20 |
|  |  |  |  |  |
| 7. |  | Show how the encryption and decryption techniques were essential for secured communication. Paraphrase it with necessary protocols. | CO2 | 20 |
| (OR) | | | | |
| 8. |  | Explain in detail about klystron crossed field devices. | CO3 | 20 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. | a. | Describe the operation and significance of Direct to home system with necessary diagrams. | CO3 | 10 |
|  | b. | Summarize the applications of Domestic satellite with frequency bands. | CO3 | 10 |

ALL THE BEST