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| **JAIPUR ENGINEERING COLLEGE AND RESEARCH CENTER** | | | | | |
| **Department of ECE** | | | | | |
| **LECTURE PLAN** | | | | | |
| **Subject: Telecommunication Engineering**  **Subject Code: 5EC3A** | | **Year: III**  **Semester: V** | | | |
|  | | | | | |
| **No. of Lecture Req. /(Avl.): 38/(40)** | |  |  |  |  |
| **Unit No./ Total lect. Req.** | **Topics** | **Lect. Req.** | **Lect. No.** | **Date of Delivery** | **Remark/ Actual lect. Taken** |
| **Unit-1**  **(08)** | 1. Types of transmission lines | 1 | 1 |  |  |
| 2. General transmission line equation | 1 | 2 |  |  |
| 3.Line constant, equivalent circuits | 1 | 3 |  |  |
| 4.Infinite line, and reflection on a line | 1 | 4 |  |  |
| 5. SWR of line with different type of terminations | 1 | 5 |  |  |
| 6. Distortion less and dissipation less lines, Losses in transmission line | 2 | 7 |  |  |
| 7. Coaxial cables, Transmission lines at audio and radio frequencies, Characteristics of quarter wave, half wave and lines of other lengths. | 2 | 9 |  |  |
| 8. Test | 1 | 10 |  |  |
| **Unit-2**  **(08)** | 1. Smith chart and its application | 2 | 12 |  |  |
| 2. Transmission line applications and  Impedance matching Network | 1 | 13 |  |  |
| 3. Single & double Stub matching | 1 | 14 |  |  |
| 4. Measurement of parameters of transmission line | 1 | 15 |  |  |
| 5. Measurement of attenuation, insertion loss, reflection coefficient and standing wave ratio | 2 | 17 |  |  |
| **Unit- 3 (07)** | 1. Elements of telephone transmission networks | 2 | 19 |  |  |
| 2. Symmetrical and Asymmetrical two port networks | 2 | 21 |  |  |
| 3. Different Attenuators, π section & T-section attenuators | 2 | 23 |  |  |
| 4. Transmission equalizers | 1 | 24 |  |  |
| 5. Filters, constant K section, Ladder type | 2 | 27 |  |  |
| 6. π section filter, T-section filter | 2 | 29 |  |  |
| 7. m-derived filter sections and Lattice filter section | 1 | 30 |  |  |
| **Unit-4**  **(07)** | 1. Voice transmission and Two wire/ Four wire transmission | 1 | 31 |  |  |
| 2.Multi-channel systems: Frequency division & time division multiplexing | 1 | 32 |  |  |
| 3.Echo suppressors & cancellers and cross talk and Telephone set, Touch tone dial types | 1 | 33 |  |  |
| 4. Numbering Concept for Telephony, . Telephone Traffic Measurements and Subscriber loop Design | 1 | 34 |  |  |
| **Unit-5**  **(08)** | 1. Introduction to switching Concepts, De-generation, Availability Grading | 1 | 35 |  |  |
| 2. Principle: Electronic Exchange, EPABX and SPC telephone Exchange | 1 | 36 |  |  |
| 3. Principle: Electronic Exchange, EPABX and SPC telephone Exchange | 1 | 37 |  |  |
| 4. Multistage switches, Time Switch, Space Switch., STS and TST Switches, Concept of Supervisory and AC signaling | 1 | 38 |  |  |
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