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| 4 | <u>Satellite sub-systems</u> : Study of Architecture and Roles of various sub-systems of a satellite system such as Telemetry, tracking, command and monitoring (TTC & M), Attitude and orbit control system (AOCS), Communication sub-system, power sub-systems etc. |
| 5 | <u>Typical Phenomena in Satellite Communication</u> : Solar Eclipse on satellite, <u>its effects, remedies for Eclipse</u> , Sun Transit Outage phenomena, <u>its effects and remedies</u> , <u>Doppler frequency shift phenomena and expression for Doppler shift</u> . Satellite link budget |
| 6 | Flux density and received signal power equations, Calculation of System noise temperature for satellite receiver, noise power calculation, Drafting of satellite link budget and C/N ratio calculations in clear air and rainy conditions. |
| 7 | <u>Modulation and Multiple Access Schemes</u> : Various modulation schemes used in satellite communication, Meaning of Multiple Access, Multiple access schemes based on time, frequency, and code sharing namely TDMA, FDMA and CDMA. |