TELECOMMUNICATIONS FOR SOCIETY

Course Code	19ES5601B	Year	III	Semester	II
Course Category	Open Elective-II	Branch	Common to All	Course Type	Theory
Credits	3	L – T – P	3 – 0 – 0	Prerequisites	Nil
Continuous Internal Evaluation	30	Semester End Evaluation	70	Total Marks	100

Course Outcomes		Levels
Upon successful completion of the course, the student will be able to		
CO1	Infer the basic knowledge of telecommunication system, regulation and standards of telecom regulatory bodies	L2
CO2	Able to deduce cost of different devices such as mobile, Wi-Fi and DTH operators and carry out investigation of Frequency Management and Business on Bandwidth.	L3
CO3	Make use of revolutionary changes in mobile and wireless technologies to understand recent developments.	L3
CO4	Examine different optical communication components.	L4
CO5	Justify the use of satellite orbits, different components and sub-systems in advanced communication systems .	L4

	Contribution of Course Outcomes towards achievement of Program Outcomes Strength of correlations (3: High, 2: Moderate, 1: Low)													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	2	2								2	2	2
CO2	3	3	2	2								2	2	2
CO3	3	3	2	2								2	2	2
CO4	3	3	2	2								2	2	2
CO5	3	3	2	2								2	2	2

Syllabus		
Unit No	Contents	Mapped CO s
1	**TELECOMMUNICATION SYSTEMS:** Telephones, Telephone System, Facsimile, Internet Telephony. Telecommunication Standards and Regulations - International telecommunication union (ITU) - TRAI and its role – Frequency management – Cost computations – Mobile and DTH operations – Role of wireless planning commission (WPC) for telecommunications in India.	CO1
11	**TELECOM BUSINESS MANAGEMENT:** Automated teller machines – Teleconferencing – Telecommuting –Customer oriented communication aspects – Telecom billing - Concepts of data rate and bandwidth requirements – Digital subscriber line – Broadband technologies – Digital home – Voice enabled DSL.	CO 2
III	**CELL PHONE TECHNOLOGIES**: Cellular Telephone Systems, A Cellular Industry Overview, 2G and 3G Digital Cell Phone Systems,	CO3

	Long Term Evolution and 4G Cellular Systems **WIRELESS TECHNOLOGIES:** Wireless LAN, PANs and Bluetooth, ZigBee and Mesh Wireless Networks, WiMAX and Wireless Metropolitan-Area Networks	
IV	**OPTICAL COMMUNICATION:** Optical Principles, Optical Communication Systems, Fiber-Optic Cables, Optical Transmitters and Receivers.	CO4
V	**SATELLITE COMMUNICATION:** Satellite Orbits, Satellite Communication Systems, Satellite Subsystems, Ground Stations, Satellite Applications, Global Navigation Satellite Systems.	CO5

Learning Recourse(s)

Text Book(s)

1. Louis E. Frenzel Jr., Principles of Electronic Communication Systems, 4/e, Mc Graw Hill Publications, McGraw-Hill Education, 2016.
2. Willium C. Y. Lee, "Wireless & Cellular Telecommunications", McGraw-Hill Companies Inc, Third Edition, 2006.

Reference Book(s)

1. Wayne Tomasi, Electronic Communication Systems, 5/e, Pearson Education, 2009.
2. Wayne Tomasi, Advanced Electronic Communication Systems, 4/e, Pearson Education, 2013.
3. Dennis Roddy, Electronic Communications, 4/e, Pearson Education, 2003