

	<b>5.2</b>	TDMA: Reference Burst; Preamble and Postamble, carrier recovery, network synchronization, unique word detection, traffic data, frame efficiency, channel capacity, preassigned TDMA, demand assigned TDMA, satellite switched TDMA	
	<b>5.3</b>	Code Division Multiple Access: Direct-sequence spread spectrum-acquisition and tracking, spectrum spreading and despreading – CDMA throughput	
<b>6.0</b>		<b>Satellite Applications</b>	<b>10</b>
	<b>6.1</b>	VSAT systems: Advantages, configurations, frequency bands, elements, Applications	
	<b>6.2</b>	Broadcast services: Television broadcast systems, DAB,	
	<b>6.3</b>	Mobile satellite communication: INMARSAT, LMSS, mobile satellite systems with non GEO satellites	
	<b>6.4</b>	Satellite navigation systems	
	<b>6.5</b>	Laser Satellite Communication: Link analysis, optical satellite link transmitter, optical satellite link receiver, satellite beam acquisition, tracking & positioning, deep space optical communication link	
	<b>6.6</b>	Recent applications	
	<b>6.7</b>	Modern development and future trends	
		<b>Total</b>	<b>48</b>

#### **Text Books & References :**

1. Dennis Roddy, “Satellite Communications”, 4th Ed., Mc. Graw-Hill International Ed. 2009.
2. M. Richharia, “Satellite Communication Systems Design Principles”, Macmillan Press Ltd. Second Edition 2003.
3. R. N. Mutangi, “ Satellite Communication”, Oxford university press, 2016.
4. Gerard Maral and Michel Bousquet, “Satellite Communication Systems”, 4th Edition Wiley Publication
5. Gerard Maral, “VSAT Networks”, John Willy & Sons
6. Timothy Pratt, Charles Bostian, and Jeremy Allmuti, “Satellite Communications”, John Willy & Sons (Asia) Pvt. Ltd. 2004
7. Wilbur L. Pritchard, Henri G. Suyderehoud, and Robert A. Nelson, “Satellite Communication systems Engineering”, Pearson Publication