

Module No.	Unit No.	Topics	Hrs.
<b>1.0</b>		<b>Wireless Body Area Networks</b>	<b>12</b>
	<b>1.1</b>	Introduction to WBAN, Network Architecture, Network Components	
	<b>1.2</b>	Network Protocol: Physical Layer, Data Link layer, Media Access Control (MAC) Layer, Network Layer	
	<b>1.3</b>	<b>WBAN Technologies:</b> Bluetooth: Concept of Piconet, Scatternet, Protocol Stack Connection establishment <b>Zigbee:</b> Components, Protocol Stack, Architecture & Network Topologies	
<b>2.0</b>		<b>Wireless LAN</b>	<b>10</b>
	<b>2.1</b>	Introduction to wireless LAN, Transmission Techniques	
	<b>2.2</b>	Medium Access Control Protocol Issues: Hidden Terminal Problem, Reliability, Collision Avoidance, Congestion Avoidance, Congestion Control, Energy Efficiency	
	<b>2.3</b>	IEEE 802.11 Standard for Wireless LAN: Network Architecture, Physical Layer, MAC Layer, Security, System design and considerations	
	<b>2.4</b>	Enhancements to IEEE 802.11 MAC: Power Control, Spatial Reusability & QoS Provisioning	
<b>3.0</b>		<b>Wireless PAN</b>	<b>08</b>
	<b>3.1</b>	Introduction to wireless PAN, Need of Wireless PAN	
	<b>3.2</b>	Bluetooth Technology: History & Applications, Technical Overview, Bluetooth Specifications, Piconet Synchronization, master-slave switch, Bluetooth security.	
	<b>3.3</b>	Enhancements to Bluetooth: Bluetooth Interface issues, Intra & Inter Piconet Scheduling, Scatternet Formation, QoS Assignment	
	<b>3.4</b>	IEEE 802.15 Working group for WPAN, IEEE 802.15.3 & IEEE 802.15.4	
	<b>3.5</b>	Comparison between WPAN System & Comparison between WLAN & WPAN	
<b>4.0</b>		<b>Wireless MAN</b>	<b>08</b>
	<b>4.1</b>	Introduction to Wireless Metropolitan Area Networks, IEEE 802.16 Standards Advantages of IEEE 802.16	
	<b>4.2</b>	WMAN Network Architecture: Network Components, features of WiMAX, WiMAX Mobility Support	
	<b>4.3</b>	Network Protocols : Physical Layer, MAC Layer	
		WMAN Applications: Banking Networks, Educational Networks, Public Safety	
<b>5.0</b>		<b>Ultra wideband Communication</b>	<b>06</b>
	<b>5.1</b>	Introduction, UWB indoor channel, UWB capacity	