**PUNE INSTITUTE OF COMPUTER TECHNOLOGY, PUNE**

**ACADEMIC YEAR 2024-25**

**DEPARTMENT OF COMPUTER ENGINEERING**

**CNSL ASSIGNMENT NO 2**

**NAME : MISBAH IQBAL BAGWAN ROLL NO : 31455**

**BATCH : M4 CLASS: TE-IV**

**PROBLEM STATEMENT:** Setup a WAN which contains wired as well as wireless LAN by using a

packet tracer tool. Demonstrate transfer of a packet from LAN 1 (wired LAN) to LAN2 (Wireless LAN).

**REQUIREMENT :** **Cisco Packet Tracer Version Number 8.2.2**

**COURSE OBJECTIVES:** Setup Wired to Wireless LAN

**COURSE OUTCOME:** Creation of Wired to Wireless Network

**Theory:**

**DIFFERENCE BETWEEN GUIDED TRANSMISSION MEDIA AND UNGUIDED TRANSMISSION MEDIA**

|  |  |  |
| --- | --- | --- |
| **Feature** | **Guided Medium** | **Unguided Medium** |
| **Medium** | Coaxial cable ,shielded twisted pair cables -UTP and STP ,Fibre optic cables | Infrared,radiowave,  microwave,air,vaccum |
| **Data Transmission Rates** | |  | | --- | | higher |  |  | | --- | |  | | lower |
| **Insttalltion** | Complex and costly | easier |
| **Applications** | **In LANS,TV,Internet ,telephony** | **WLANS ,mobile communication, satellite communication** |

**WIRELESS TOPOLOGIES**

**A)ADHOC**

An ad hoc wireless network is a decentralized type of wireless network where devices communicate directly with each other without relying on N/W devices like routers or access points.

This topology is also known as a peer-to-peer network.

device communicate directly without any intermediate devices

**B)INFRASTRUCTURE**

An infrastructure wireless network relies on access points (APs) and routers to manage communication between devices.

This topology is more structured compared to an ad hoc network.

The client stations do not communicate directly other client stations.

Rather, they communicate with the AP, and the AP forwards the frames to the destination station

