

**Date:** 18/06/2025

### **Lab Practical #03:**

Study of different types of network cables & connectors and crimping a LAN.

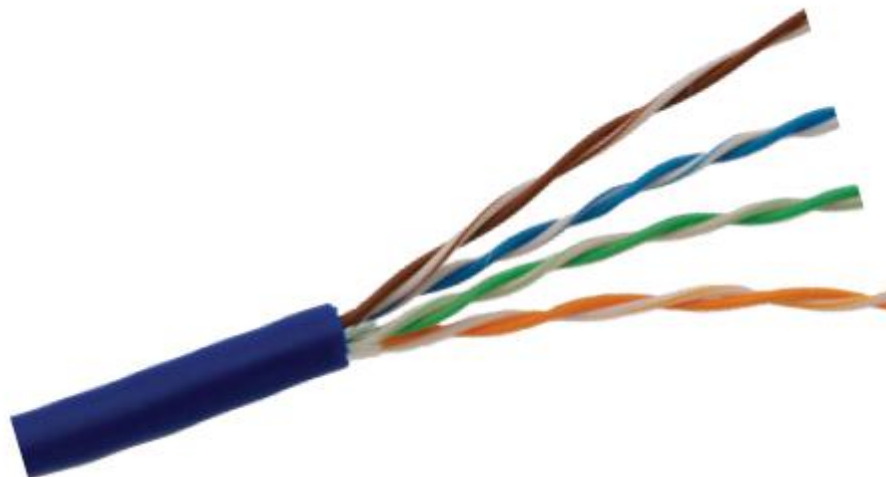
### **Practical Assignment #03:**

1. List various networks cable. Also, write short description.
2. Difference between guided and unguided media.
3. Give cross-wired cable and straight through cable diagram (Color Code wise).

#### **1. List various networks cable and connectors. Also, write short description.**

##### **a) Twisted Pair Cable:**

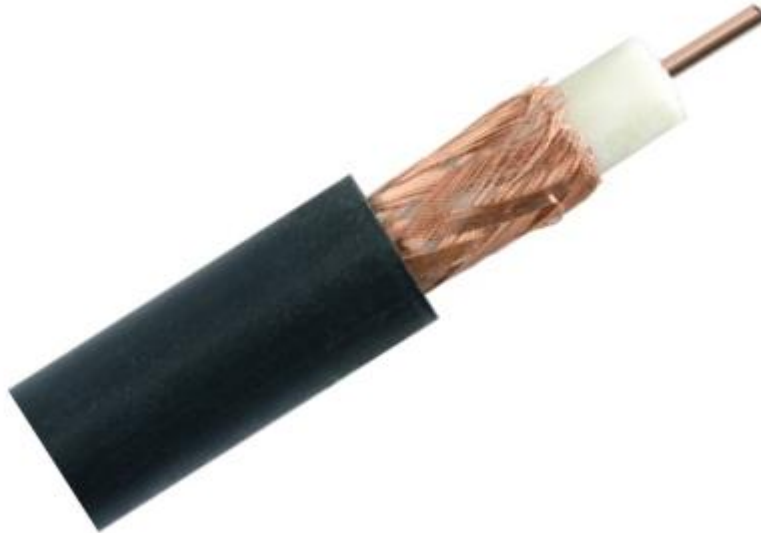
- **Description:**  
Used in LANs. UTP (Unshielded Twisted Pair) is common in homes/offices. STP (Shielded Twisted Pair) includes shielding to prevent interference.
- **Diagram:**



##### **b) Coaxial Cable:**

- **Description:**  
Contains a core conductor surrounded by insulation, shielding, and outer jacket. Used in cable TV and early Ethernet.
- **Diagram:**

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**c) Fiber Optic Cable:**

- **Description:**  
Transmits data as light. Offers very high speed and long-distance transmission. Immune to electromagnetic interference.
- **Diagram:**



**2. Difference between guided and unguided media.**

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No.	Guided Media	Unguided Media
1	Uses physical path (cables) to transmit signals.	Transmits signals wirelessly through air.
2	Examples: Twisted Pair, Coaxial, Fiber Optic.	Examples: Radio waves, Microwaves, Infrared.
3	High security and less susceptible to interference.	More vulnerable to interference and signal loss.
4	Installation cost is higher.	Cheaper and easier to deploy over large areas.
5	Directional; point-to-point or point-to-multipoint.	Mostly omnidirectional broadcast.

**3. Give cross-wired cable and straight through cable diagram (Color Code wise).**

a) Cross-wired Cable Diagram (Color Code)



b) Straight Through Cable Diagram (Color Code)

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