



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:**

c) Fiber Optic Cable:

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

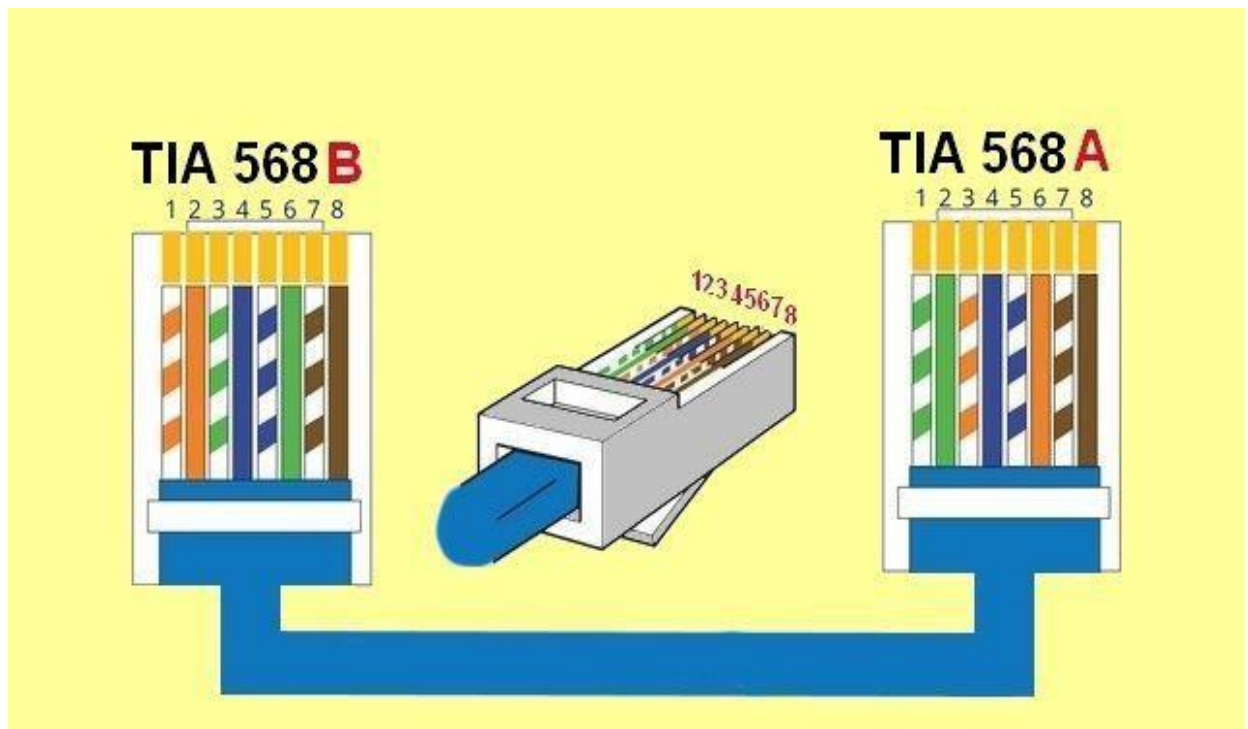
2. Difference between guided and unguided media.

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)

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b) Straight Through Cable Diagram (Color Code)

