**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).

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

1. **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**:

1. **Coaxial Cable:**
   * **Description**:

Contains a core conductor surrounded by insulation, shielding, and outer jacket. Used in cable TV and early Ethernet.

* + **Diagram**:

1. **Fiber Optic Cable:**
   * **Description**:

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

* + **Diagram**:

1. **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. |

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

1. Cross-wired Cable Diagram (Color Code)

**----- Image / Diagram Only -----**

1. Straight Through Cable Diagram (Color Code)

**----- Image / Diagram Only -----**