

23/11/24

Practical - 2Aim:

study of different types of network cables

different type of cables used in networking are:

1) Unshielded Twisted Pair (UTP) cable

2) Shielded Twisted Pair (STP) cable

3) coaxial cable

4) Fibre optic cable.

Cable type	category	maximum data Transmission	Advantages / Disadvantages	Application / use.
UTP	Category 3	10 bps	<u>Advantages</u> * cheaper in cost * easy to install	10 Base-T Ethernet
	Category 5	up to 100 mbps	as they have a smaller overall diameter	Fast Ethernet, Gigabit Ethernet
	Category 5e	1 Gbps	<u>Disadvantages</u> * more prone to (EMI) Electromagnetic interference and noise.	Fast Ethernet, Gigabit Ethernet
STP	Category 6a	10 Gbps	<u>Advantages</u> * shielded * Faster than UTP.	Gigabit Ethernet, 10G Ethernet (55m) widely used in data centres

SSTP Category

10 Gbps

- * Less susceptible to noise and interference
- Disadvantages

- * Expensive
- * Greater installation effort

Gigabit Ethernet

10 G Ethernet (100 m)

Coaxial cable

RG-6

RG-59

10-100

RG-11

Mbps

- * High bandwidth

- * Immune to interference

- * Low loss

bandwidth

- * Versatile

Disadvantages

- * Limited distance

- * Cost

- * Size is bulky

Speed of signal is 500m

Television network

High speed

internet

connections

Fibre optics cable

single mode

multimode

100 Gbps

Advantages

- * High speed

- * High bandwidth

- * High security

- * Long distance

Disadvantages

- * Expensive

- * Requires

skilled

installers

* maximum

distance of

fibre optics

cable is

around

100 meters

Image: of UTP:



Image of STP:

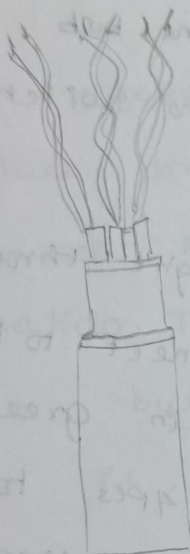


Image of coaxial cable

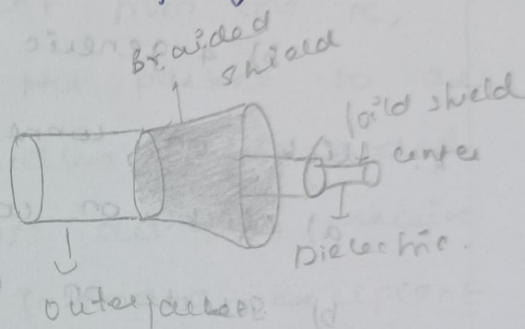


Image of STP:

Result:

Ue
23/7/24

This different type of network cable
has been studied.