

Aim :-
study of different types of network cables.

1. Unshield 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
UTP	Category 3	10 bps	<u>Advantages :-</u> * cheap * easy to install <u>Disadvantages :-</u> * More prone to EMI	10 Base T Ethernet Fast Ethernet Gigabit Ethernet
	Category 5	upto 100 Mbps		
	Category 5e	1 Gbps		
STP	Category 6.6a	10 Gbps	<u>Advantages :-</u> * shielded * Faster than UTP <u>Disadvantages :-</u> * Expensive * Greater installation	Gigabit Ethernet 10g Ethernet widely used in data centers
SSTP	Category 7			
Coaxial cable	RG-6 RG-59 RG-11	10-100 Mbps	<u>Advantages :-</u> * High bandwidth * Immune to inference * low loss <u>Disadvantages :-</u> * limited distance * cost * size is bulky	Speed of signals is soon Television Network High speed Internet

fibre optics	single mode / Multi mode	1000Gbps	Advantages :- • high speed • high bandwidth • high security Disadvantages :- • expensive • requires skilled installers	Maximum distance of fibre optic cable is around 100 meters
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STUDENT OBSERVATION

1. Difference between cross cable and cable?

A straight cable connects different while cross cable connects similar devices by swapping transmit.

2. Which type of cable is used to connect two PC?

cross cable is used to connect two PC

3. Which cable is used to connect a router to PC?

straight cable is used to connect a router to PC.

4. Find the category of twisted pair cables used to connect the PC to Network socket?

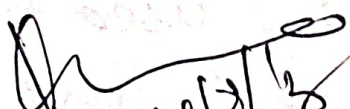
Category 5e or cat 6 are used to connect the PC to network socket.

5. Write down understanding, challenges faced and output received?

- Learnt the codes and wiring standards
- Difficulty in arranging wires in correct order
- successfully made working cables that connected devices and enabled proper network communication.

Result:

Hence, the different types of network cables have been successfully studied.


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