NETWORK CABLES.

EX NO: 2

DATE:- 31.07.2025

AIM:-

Study of Different types of Networks. Cables.

a, understand different types of Network cable. Different types 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	Category3	10 bps	Adv:- * cheapes in cost * Easy to install. Disadv:- * Susceptible to EMI * noise.	* wBase- ethernet. * Past. ethernet Gig bit ethernet
	Category5	up to 10 mbps.		
	Category 5e	1 Gbps.		
STP	Category6/6a	10 Gbps.	Adv -:- * shielded. * Faster than UTP disadv:- * Expensive. * Requires installation effort	* Gigabit ethernet- 10G ethernet (55m) widely used in datacenter.
SSTP	Category 7	10 Gbps.		
Coaxial Cable.	RG-6 RG-59 RG-11	10-100 mbps	Adv * High bandwidth disadv:- * Limited distance and cost.	* speed of is 500m * Television network high speed.

Fibre optics cable.	Single mode. multi mode.	100 Gbps.	Adv:: * High speed, security. * Long distance. Disadvan: * Req skilled installs. * Expensive	* maximum distance of fibre optic cable is around 100 meter

Student observation:

1. Difference between cross cable and straight cable?

A straight cable connect different devices, while cross cable connects similar devices, by swapping transmit and receives wires.

2. which type of capale is useed to connect two?

Cross Cable.

3. which cable is used to connect a routes to pc?

Straight Cable.

4. Find the category twisted pair cables used to connect the pc to network socket?

Category 5e, or category 6.

5, Write down understanding challenges faced and output received?

Learnt the colour codes and wiring. Standards difficulty in arranging wires correct orders. Successfully make working cables that connected devices and enabled proper network communication.

Results:

Hence the different types of networks Cables