

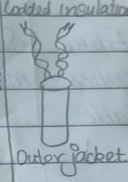
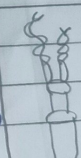
27/24 Study of Network Cables.

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Aim :- Study of different types of cable.

Standard Different type of network cable :-

1. Un-shielded Twisted Pair (UTP) cable
2. Shielded Twisted Pair (STP) cable
3. Coaxial cable
4. Fibre optic cable.

Cable Type	Category	Maximum data transmission	Advantage/Dis-advantage	Application	Image
UTP	Category 3	10 Gbps	Advantage: * cheaper * Easy to install	10 Base-T Ethernet	
	Category 5	up to 100 Mbps	they have smaller diameter	Fast ethernet, Gigabit ethernet	
	Category 5e	1 Gbps	Dis-advantage: * More prone to EMI		
STP	Category 6, 6a	10 Gbps	Advantage: * Shielded * Faster than UTP * Less susceptible to noise and interference	Gigabit Ethernet, widely used in data center	
STP	Category 7	10 Gbps	Dis-advantage: * Expensive * Greater installation effort	Gigabit ethernet, 10 Gb Ethernet (100m)	

Coaxial cable	RG-6, RG-59, RG-11	10-100Mbps	Advantage: * High bandwidth * Immune to interference * Low loss bandwidth * Versatile Disadvantage: * Limited distance * Cost * Size is bulky	Speed of signal is 500m TV network high speed Internet connections
			Advantage: * High speed * High bandwidth * High security * Long distance Disadvantage: * Expensive * Require skilled installers	Maximum distance of fibre optic cable is around 100 metres

b) Make your own ethernet cross-over cable / straight cable.

Tools and parts needed:

* Ethernet cabling CAT5e is Certified for gigabit support, but CAT5 cabling works as well.

Just over short distance.

* A Crimping tool :- This is an all in one networking tool shaped to push down the pins in the plug and strip and cut the shielding off the cable.

* Two RJ45 plugs

* Optional 2 plug shield.

Question-Answer.

- ① Cross Cable - Connected for same devices
- Straight Cable - Connected for different devices.
- ② Cross Cable
- ③ Straight Cable
- ④ Understanding - Includes arranging wires
- challenge - Correct wire arrangement
- O/P - Successful connection of wire

Result: 23/24
This, the different type of network cable is studied