

Ex No: ²23-07-24

Practical-2

Date: 23-07-24 Study of different network Cables.

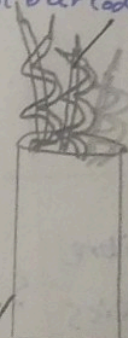
Aim:

Study of different types of Network Cables.

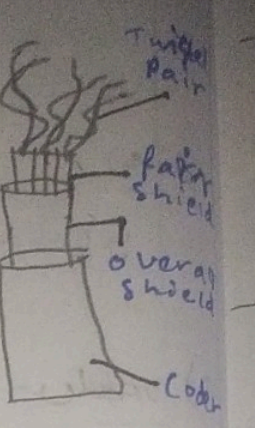
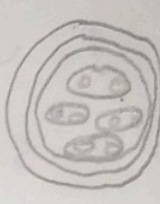

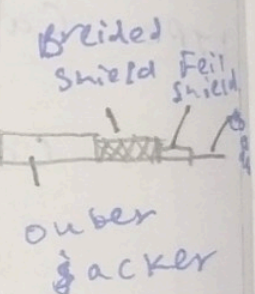
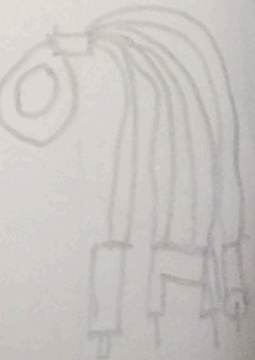
a) Understand different types of network cable

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	Advantage Disadvantage	Application/ use	Image
UTP	Category 3	10 bps.	Advantage * Cheaper in cost	10Base-T Ethernet	
	Category 5	UP to 100mbps	* Easy to install as they have a smaller overall diameter	Fast Ethernet Gigabit Ethernet	
	Category 5e	1 Gbps	Disadvantage * More prone to (EMI) Electro magnetic interference and noise	Fast Ethernet Gigabit Ethernet	

Outer Jacket

STP	Category 6, 6a	10 Gbps	<p>Advantages</p> <ul style="list-style-type: none"> * Shielded * Faster than UTP * Less susceptible to noise and interference <p>Disadvantage</p> <ul style="list-style-type: none"> * Expensive * Greater installation effort 	<p>Gigabit Ethernet, 10 G Ethernet (55m) widely used in data centres</p> <p>Gigabit Ethernet, 10 G Ethernet (100 m)</p>	
SSTP	Category 7	10 Gbps			 
Coaxial Cable	RG-6, RG-59, RG-11	10-100 Mbps	<p>Advantages</p> <ul style="list-style-type: none"> * High bandwidth * Immune to interference * Low loss bandwidth * Versatile <p>Disadvantages</p> <ul style="list-style-type: none"> * Limited distance * Cost * Size is bulky 	<p>Speed of signal is 500m</p> <p>Television network</p> <p>High Speed internet connection</p>	
Fibre Optics cable	Single mode, Multi mode	100 Gbps	<p>Advantage</p> <ul style="list-style-type: none"> * High Speed * High bandwidth * High security * Long distance <p>Disadvantage</p> <ul style="list-style-type: none"> * Expensive * Required skilled installers 	<p>Maximum distance of fibre optics cable is around 100 meters</p>	 <p>Fibre Optics cable</p>

Result:

Thus the different type of network cable has been studied.

~~Q. He~~
~~23/7/24~~