

1.

- a. The difference between solid wire UTP and stranded wire is that solid wire uses a copper for each conductor and stranded wire uses multiple thin strands twisted together to make each conductor.
- b. Solid wire offers a stronger signal over long distances.
- c. Stranded wire is better in situations where you need more flexibility and can bend repeatedly without breaking
- d. I would use stranded wire inside of homes where you'd need to twist and turn them around corners to connect to different devices And I would use solid wire for linking different buildings together and also inside of a home's walls.
- e. Solid wire UTP would be better for factor use because it offers more protection and better signal.

2.

No you shouldn't cut the cable at 50 meters exactly because you want to have some extra bit of cable in case of movement this will help prevent the cable from snapping.

3.

The reason why you score the jacket cord instead of cutting all the way through the jacket is because you don't want to accidentally cut at the cable, possibly damaging them in the process.

4.

a.

The colors of the four pairs is blue/white white/brown white/green and white/orange

b. white/green goes into pin 3

c. yes

5.

After cutting the wires there should only be 12mm of the jacket exposed

6.

a.

The RJ-45s insulation displacement works by connecting the ethernet cables to an RJ 45 connector where the metal connects this works by clipping into the cable through its insulation making contact with the conductor.

b.

Strain relief approach works by including a protective clamp around the jacket of the cable stop forces acting upon the cable from transferring to the other side of the connector

7.

a.

yes

b.

They test for basic connectivity issues, incorrect wiring, and correct wire mapping.

c.

They test for signal quality and checking to make sure it follows industry standards.