Passive Optical Networks - PONs

* List the Customer Premise Equipment (CPE) needed for PON service and briefly describe its purpose.

Answer:

1. ONT – optical network terminal – used to split the BW for different service (telephone/ Internet)
2. ONU – Optical Network Unit – acts like a demodulator
3. NT - ?
4. VDSL - Very High Bitrate Digital Subscriber Line - VDSL is the new generation of broadband internet that uses your copper telephone line but offers faster connection speeds.
5. FTTH - Fiber to the home, also called fiber to the premises (FTTP), is the installation and use of optical fiber from a central point directly to individual buildings such as residences, apartment buildings and businesses to provide high-speed internet access.
6. FTTB - FTTB (Fiber to the Building) network architectures consists of replacing copper pairs with fiber connectivity solutions , from the PoP (Point of Presence) or FCP (Fiber Concentration Point) all the way to the vicinity of the MDU or the SDU to be connected.
7. FFFTC - Fiber to the Cabinet.

* List the Outside Plant (OSP) part of a PON

Answer:

1. Optical Splitter – Passive Optical Network does not utilize the electrically powered switching equipment and instead uses Optical Splitters to separate and collect optical signal as they move through the network.
2. Fiber Optic cable

* List the Service Provider Equipment (SPE) needed for a PON service and briefly describe its purpose.

Answer:

1. OLT – Optical Line Terminal – gives the ability to services provider to send services to out Internet, Telephone Network or Cable TV Network. Access to voice and Internet. If quipped, it can provide access to a Cable Service Provider