

## Assessment Response

Title: Charter fiber module assessment

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Total Score: 40

Date: 15-08-2023 11:34:33

Description:

This assessment is designed to evaluate your understanding of fiber optics and its various components. The exam will cover a comprehensive range of topics related to HFC Network basics, including fiber workstream, routing commands, Splice connections (splicing in Magellan), Wave division multiplexing, patch/term panels, circuit managing, termination of port address allocation, area specs, MOP, deliverables, Asbuilts. The assessment aims to gauge your proficiency in working with HFC Network and your ability to apply theoretical knowledge to practical scenarios on the Magellan tool.

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### Section1 : FIBER - ASBUILT

Max Score: 40

**Question1: What must be done before changing fiber quantities for fiber sheaths already spliced?**

Point:1

Option1: Change sheath model

Option2: Delete fiber sheath and replace with correct count

Option3: Update cross section

Option4: Un splice all connected fibers on either side of the sheath

Answer: Un splice all connected fibers on either side of the sheath

**Question2: What are the 12 default fiber colors in correct order?**

Point:1

Option1: Blue, orange, green, brown, slate, white, red, black, yellow, violet, rose, aqua.

Option2: Blue, orange, purple, indigo, red, yellow, burgundy, rose, pink, turquoise, white, grey.

Option3: Orange, blue, green, brown, red, black, yellow, violet, rose, aqua, slate, white.

Option4: Aqua, rose, violet, yellow, black, red, white, slate, brown, green, orange, blue.

Answer: Blue, orange, green, brown, slate, white, red, black, yellow, violet, rose, aqua.

**Question3: Which of the following definitions best describes Multiplexing?**

Point:1

Option1: Splicing two fibers together

Option2: Replacing small pup splice can with a 450b splice can.

Option3: Multiple analog or digital signals are combined into one signal over a shared medium.

Option4: Doubling of the fiber quantity

Answer: Multiple analog or digital signals are combined into one signal over a shared medium.

**Question4: True or False: Riser footage does not get added when placing fiber**

Point:1

Option1: True

Option2: False

Answer: False

**Question5: A splice case installed in the MPOE or common area in a commercial venue is commonly referred to as what?**

Point:1

Option1: Transition splice

Option2: Right of way splice

Option3: Common splice

Option4: Commercial splice

Answer: Transition splice

**Question6: The optical components used in a HFC node are commonly referred to as what?**

Point:1

Option1: In and out

Option2: Upstream and Downstream

Option3: Lasers and Diodes

Option4: Receivers and transmitters

Answer: Receivers and transmitters

**Question7: What pair of fibers should be used first in a new sheath (in most cases)?**

Point:1

Option1: Blue and orange

Option2: Green and brown

Option3: Rose and aqua

Option4: Red and black

Answer: Blue and orange

**Question8: How would you change the length of a fiber span?**

Point:1

Option1: Inspector panel > edit tool.

Option2: Splice matrix window

Option3: Update support footage since they are linked.

Option4: Double click on fiber sheath > edit length

Answer: Update support footage since they are linked.

**Question9: True or False: The "Process Powering" tool needs to be ran on fiber.**

Point:1

Option1: True

Option2: False

Answer: False

**Question10: What type of devices are FBTP's, and Wick boxes considered in Magellan?**

Point:1

Option1: Nodes

Option2: Splices

Option3: Cabinets

Option4: Support Structures

Answer: Nodes

**Question11: What term describes how light is guided through the core of fiber optic strands?**

Point:1

Option1: Speed of light

Option2: Glass transparency

Option3: Fusion

Option4: Index of refraction

Answer: Index of refraction

**Question12: True or False: Slack Coils are installed to provide enough slack for the fiber tech to move the splice enclosure to a clean space and perform the necessary splicing.**

Point:1

Option1: True

Option2: False

Answer: True

**Question13: True or False: Fiber Nodes NEVER require more than one fiber connected in the housing.**

Point:1

Option1: True

Option2: False

Answer: False

**Question14: True or False: You can install two mux filters of the same frequency in sequence/series.**

Point:1

Option1: True

Option2: False

Answer: False

**Question15: Which of the following is the standard mux wavelength group for a 4-channel low mux card?**

Point:1

Option1: 1430, 1450, 1470, 1490

Option2: 1510, 1530, 1550, 1570

Option3: 1470, 1490, 1510, 1530

Option4: 1470, 1510, 1550, 1590

Answer: 1470, 1490, 1510, 1530

**Question16: True or False: Installing a ring cut splice case only requires enough slack looped fiber to perform the installation.**

Point:1

Option1: True

Option2: False

Answer: False

**Question17: How many fibers are in a standard buffer tube?**

Point:1

Option1: 8

Option2: 10

Option3: 24

Option4: 12

Answer: 12

**Question18: How many fibers are in a buffer tube with a 6ct cross section?**

Point:1

Option1: 12

Option2: 24

Option3: 6

Option4: 18

Answer: 6

**Question19: How many buffer tubes are in a 48ct sheath with a standard 12ct cross section?**

Point:1

Option1: There are no sheaths that large.

Option2: 4

Option3: 12

Option4: 8

Answer: 4

**Question20: How many customers can be served from a pair of 8 channel mux cards if each customer needs a RX & TX?**

Point:1

Option1: 8

Option2: 16

Option3: 4

Option4: 2

Answer: 8

**Question21: Where would you go to generate a Trace Report?**

Point:1

Option1: Splice matrix window

Option2: Reports tool

Option3: Inspector panel

Option4: Circuit manager

Answer: Splice matrix window

**Question22: What fiber equipment will have the Term Panel option when adding internals?**

Point:1

Option1: Nodes and hybrids

Option2: All fiber equipment

Option3: Only headend

Option4: Headend and cabinets

Answer: Headend and cabinets

**Question23: True or False: You can change the fiber count of a sheath without changing the fiber model.**

Point:1

Option1: True

Option2: False

Answer: False

**Question24: What fiber status indicates a working fiber connection? (Light passing through)?**

Point:1

Option1: WK

Option2: SP

Option3: DK

Option4: Irrelevant

Answer: WK

**Question25: True or False: There is a limit to the number of sheaths that can be spliced through a splice enclosure.**

Point:1

Option1: True

Option2: False

Answer: True

**Question26: True or False: There is no distance limit for transmitting light through fiber optic cables.**

Point:1

Option1: True

Option2: False

Answer: False

**Question27: A R.O.W. splice is most often installed outside of the target venue, either on a pole at the street/easement or in an easily accessible underground support structure. What does R.O.W. stand for?**

Point:1

Option1: Return Optical Wave

Option2: Right Over Water

Option3: Redundancy Optical Wave





Option4: Right of Way

Answer: Right of Way

**Question28: See the below picture ,choose the correct option for Splice**

**matrix tool icon.**

Point:1

- a. 
- b. 
- c. 
- d. 

Option1: A

Option2: B

Option3: C

Option4: D

[Answer: A](#)

**Question29: True or False: Fiber needs support network in place before it can be drafted and starts with a device.**

Point:1

Option1: True

Option2: False

[Answer: True](#)

**Question30: Where would you go to place a Generic business class in Fiber work stream?**

Point:1

Option1: Splice can

Option2: Headend

Option3: Node

Option4: Cabinet

[Answer: Node](#)

**Question31: Splice reports are run from\_\_\_\_\_on fiber devices?**

Point:1

Option1: Splice matrix Window

Option2: Inspector panel

Option3: Reports tool

Option4: Work Stream

Answer: Inspector panel

**Question32: True or False: Fiber spans are more efficient; an entire node network can be serviced with 1 fiber without carrying the power and more data sent farther and faster.**

Point:1

Option1: True

Option2: False

Answer: True

**Question33: \_\_\_\_\_are the primary device used to split the fiber route and send various count sheaths father into the HFC network branching off the main tree or ring.**

Point:1

Option1: Splice cans

Option2: Multiplexer

Option3: Slack coils

Option4: Fiber splitters

Answer: Splice cans

**Question34: Which are the fiber devices used to service multiple clients in the same venue using a single muxed pair. This is often seen in dense cities, high-rise buildings, and venues with multiple different customers ?**

Point:1

Option1: Splice cans

Option2: Multiplexer

Option3: Slack coils

Option4: Aggregate Switches

Answer: Aggregate Switches

**Question35: True or False: Each individual fiber needs to be spliced to a continuing fiber to maintain the light circuit from Headend to termination (node, fiber tap or switch)?**

Point:1

Option1: True

Option2: False

Answer: True

**Question36: Which is the middle transition phase for data between where the signals start at the headend and where the signal ends at the**



**customer?**

Point:1

Option1: Transmitter

Option2: GPON

Option3: Fiber optics

Option4: Index of Refraction

[Answer: Fiber optics](#)

**Question37: Which are the common devices used to terminate the client's fiber circuit. Usually placed in a data closet, server room or I.T room.**

Point:1

Option1: Aggregate Switches

Option2: Nodes

Option3: Cell towers

Option4: Fiber termination Points (FBTP'S)

[Answer: Fiber termination Points \(FBTP'S\)](#)

**Question38: Which are used in both Aerial and UG routes. Provides the fiber tech enough slack to remove a splice case from its support structure and complete the splicing in their enough splice truck, also allows for potential ring cup splice installations.**

Point:1

Option1: Slack coils/Loops

Option2: Nodes

Option3: Splitters

Option4: Fiber termination Points (FBTP'S)

[Answer: Slack coils/Loops](#)

**Question39: In which statuses of splice connections, light is received from headend on one fiber and continues the other fiber ?**

Point:1

Option1: Spare (SP)

Option2: Dark (DK)

Option3: Reserved (RS)

Option4: Working (WK)

[Answer: Working \(WK\)](#)

**Question40: Which is kind of optical filter used for WDM and/or Patch/Term panels ?**

Point:1

Option1: Circuit naming

Option2: Internals

Option3: Slack Coils

Option4: Splice cans

Answer: Internals

Result:

Section1: 0

Total Score: 0/40

Percentage: 0%.

Remarks: Switching of Tab's detected.

Result: NOT CLEARED