

## Assessment Response

Title: Charter fiber module assessment

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Total Score: 40

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### 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.

### 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: 3

Total Score: 3/40

Percentage: 8%.

Remarks: Switching of Tab's detected.

**Result: NOT CLEARED**