**Troubleshooting and the Future of Networking**

**LATEST SUBMISSION GRADE**

81.25%

1.Question 1

**The ability for a protocol or program to determine that something went wrong is known as \_\_\_\_\_\_\_\_.**

redundancydata verificationerror detectiondata resilience

Ans:3

**Correct**

Awesome! Error detection is determining that an error occurred; error recovery is attempting to fix this error automatically.

2.Question 2

**The Linux and macOS program traceroute is known by a slightly different name on Windows. It's referred to as \_\_\_\_\_\_.**

tracepathpingipconfigtracert

Ans:4

**Correct**

You nailed it! These programs operate slightly differently and have slightly different names.

3.Question 3

**An organization responsible for assigning individual domain names to other organizations or individuals is known as a(n) \_\_\_\_\_\_.**

DNS registrarinternet authorityautonomous systemgovernment

Ans:1

**Correct**

Wohoo! You can use a registrar to register a domain name!

4.Question 4

**Following rules of compaction, the IPv6 address 2001:0db8:0000:0000:0000:ff00:0012:3456 could also be written as \_\_\_\_\_\_\_.**

21:db8::ff:12:34562001:db8::ff00:12:3456::10000:0000:0000:0000:0000:0000:0000:0001

Ans:2

**Correct**

Awesome! IPv6 address compaction is a great way to shorten IPv6 addresses.

5.Question 5

**The IPV4 mapped address space within IPv6 always starts with \_\_\_\_\_\_\_ zeroes.**326480128

Ans:3

**Correct**

Right on! 80 zeroes, followed by 16 ones, followed by the IPv4 address itself it how the IPv4 mapped address space works.

6.Question 6

**A support technician uses the ping utility on a system that is online, yet no response is received. What should be allowed through a firewall, for ping to operate correctly?**

Echo replyEcho requestICMPTTL

Ans:3

**Correct**

You got it! The ping utility uses the Internet Control Message Protocol (ICMP).

7.Question 7

**Most public Domain Name Servers (DNS) are available globally through which technology?**AnycastEcho requestHosts fileTime To Live (TTL) field

Ans:1

**Correct**

Awesome! Anycast is a method that pools servers to provide services as if it were a single system.

8.Question 8

**Which of these addresses is an Internet Protocol (IP) v4 loopback address?**127.0.0.1192.168.1.18.8.8.81.2.3.4

**Incorrect**

Not quite. Please review the videos in the "Digging into DNS" module for a refresher.

9.Question 9

**As an IT decision maker, you plan to satisfy business needs by using software as a service. Which option do you deploy?**Windows Server 2019Linux workstationVirtual firewallOffice 365

**Incorrect**

Not quite. Please review the videos in the "The Cloud" module for a refresher.

10.Question 10

**Unlike Linux and Mac systems, on a Windows system, the ping command sends how many echo requests?**82412

Ans:3

**Correct**

You nailed it! Linux and Mac systems send echo requests until the ping command is stopped. A Windows system sends only 4 echo requests by default.

11.Question 11

**The first field of an Internet Control Message Protocol (ICMP) packet specifies the message type. Which choices represent message type examples? Check all that apply.**

Time exceeded

**Correct**

You nailed it! The type field specifies the message type. A code field further breaks down the message type to be more specific.

Destination port unreachable

Destination network unreachable

Destination unreachable

**Correct**

Great work! The type field specifies the message type. A code field further breaks down the message type to be more specific.

**Ans:1,4**

**Correct**

Great, you got all the right answers.

12.Question 12

**When troubleshooting Domain Name System (DNS) problems, which helpful feature do public servers usually support?**Virtualization servicesICMP echo requestsPaths between nodesPort connectivity

**Incorrect**

Not quite. Please review the videos in the "Digging Into DNS" module for a refresher.

13.Question 13

**A web developer requires an environment to perform application testing. Which cloud service type does the developer choose to use?**Platform as a ServiceInfrastructure as a ServiceVirtualization serviceSoftware as a Service

Ans:1

**Correct**

You got it! With a platform as a service environment, software applications can be developed, run, and tested without the concern for the underlying technologies.

14.Question 14

**Internet Protocol (IP) v6 addresses are written out in which format?**8 groups of 12 bits6 groups of 32 bits4 groups of 16 bits8 groups of 16 bits

Ans:4

**Correct**

Awesome! IPv6 addresses are usually written out as 8 groups of 16 bits each. Each of these groups is further made up of 4 hexadecimal digits.

15.Question 15

**When the ping command is used, output is similar across operating systems. Which two values are displayed as part of the output? Check all that apply.**

Message byte size

**Correct**

You got it! Every line of output will generally display how large the message is in bytes.

Gateway address

Round-trip time

**Correct**

Well done! Every line of output will generally display how long it took for the round-trip communications.

Port number

**Ans:1,3**

**Correct**

Great, you got all the right answers.

16.Question 16

**When shortening an Internet Protocol (IP) v6 address, which two rules are used? Check all that apply.**

Replace groups of zeros with colons.

**Correct**

Woohoo! Any number of consecutive groups composed of just zeroes can be replaced with two colons.

Replace groups of ones with semicolons.

Removing all leading ones.

Removing all leading zeros.

**Correct**

Nice job! When shortening an IPv6 address, you can remove any leading zeros from a group.

**Ans:1,4**

**Correct**

Great, you got all the right answers.