**Task 1**

1. What is the key term for devices that are connected together? a) Group b) Collection **c) Network** d) System

**Task 2**

1. Who invented the World Wide Web? a) Larry Page b) Marc Andreessen c) Vint Cerf **d) Tim Berners-Lee**
2. The first documented network in action was called: a) The Internet **b) ARPANET** c) World Wide Web d) Cisco Network
3. The Internet as we know it today was invented in: a) The late 1960s **b) 1989** c) The early 2000s d) 1975
4. The World Wide Web (WWW) allowed the Internet to be used as a repository for: a) Only sending emails b) Only connecting devices **c) Storing and sharing information** d) Only military communications
5. Small networks joined together to form the Internet are called: **a) Private networks** b) Public networks c) Global networks d) Local networks
6. Networks connecting smaller networks to form the Internet are called: a) Private networks **b) Public networks** c) Wide Area Networks d) Personal Area Networks
7. A network consisting of your laptop and phone is an example of a: a) Public network b) The Internet **c) Private network** d) Global network
8. The Internet itself is an example of a: a) Private network b) Local Area Network **c) Public network** d) Personal Area Network
9. Devices on a network use what to identify themselves? a) Physical location b) User names **c) A set of labels** d) Colors

**Task 3**

1. Devices on a network have two main ways of being identified, similar to humans having a name and: a) Voice **b) Fingerprints** c) Height d) Eye color
2. Which of the following device identifiers is permeable (can change)? a) MAC Address b) Serial Number **c) IP Address** d) Physical Network Interface
3. Which of the following device identifiers is considered similar to a serial number? a) IP Address **b) MAC Address** c) Hostname d) Domain Name
4. What does "IP" stand for? a) Internal Packet b) Interface Point c) Intelligent Process **d) Internet Protocol**
5. An IP address is a set of numbers divided into how many octets? a) 2 **b) 4** c) 6 d) 8
6. What is each section of an IP address called? a) Segment **b) Octet** c) Subnet d) Block
7. The value of each octet in an IP address contributes to: a) The MAC address b) The network speed **c) The IP address of the device** d) The physical location
8. IP addresses follow a set of standards known as: a) Hardware b) Software **c) Protocols** d) Applications
9. An IP address used to identify a device on the Internet is called a: a) Private IP address b) Local IP address **c) Public IP address** d) Static IP address
10. An IP address used to identify a device within a local network is called a: a) Public IP address b) Global IP address **c) Private IP address** d) Dynamic IP address
11. Public IP addresses are typically provided by your: a) Router manufacturer b) Operating System **c) Internet Service Provider (ISP)** d) Network administrator
12. IPv4 uses a numbering system of approximately how many IP addresses? a) 2^64 **b) 2^32** c) 4.29 billion d) 340 trillion
13. What is a primary benefit of IPv6 over IPv4? a) Faster speeds b) Simpler configuration **c) Supports a significantly larger number of IP addresses** d) More secure
14. A MAC address is a how many character hexadecimal number? a) Six b) Eight c) Ten **d) Twelve**
15. In a MAC address, the characters are typically split into pairs and separated by a: a) Hyphen b) Period **c) Colon** d) Slash
16. The first six characters of a MAC address represent the company that: a) Owns the device **b) Made the network interface** c) Assigned the IP address d) Configured the network
17. The last six characters of a MAC address are a: a) Network identifier b) Subnet identifier **c) Unique number** d) Vendor identifier
18. The process of faking or pretending to be another device using its MAC address is called: a) Hacking b) Phishing **c) Spoofing** d) Cracking
19. MAC address spoofing can potentially break poorly implemented: a) Network cables b) Router hardware **c) Security designs** d) Operating systems
20. Firewalls configured to allow traffic based on the administrator's MAC address can be bypassed by: a) Changing the IP address b) Disconnecting the network cable **c) Spoofing the administrator's MAC address** d) Using a different port number
21. Places like cafes and hotels often use MAC address control for their guest Wi-Fi to potentially offer: a) More secure connections b) Free internet access **c) Better services for a price per device** d) Unlimited bandwidth for all users
22. What does the term "MAC" stand for? a) Machine Access Control b) Main Access Channel **c) Media Access Control** d) Managed Access Control
23. How many sections (in digits) does an IPv4 address have? a) 2 **b) 4** c) 6 d) 8

**Task 4**

1. Ping uses which protocol? **a) ICMP** b) UDP c) HTTP d) TCP
2. What does ICMP stand for? a) Internet Connection Management Protocol **b) Internet Control Message Protocol** c) Internal Communication Message Protocol d) Integrated Computer Network Protocol
3. Ping is used to determine the: a) Speed of data transfer b) Amount of data transferred **c) Performance of a connection between devices** d) Security of a connection
4. Ping measures the time taken for ICMP packets using: a) TCP handshakes b) UDP datagrams **c) ICMP's echo packet and echo reply** d) HTTP requests and responses
5. Ping can be performed against: a) Only devices on a local network b) Only websites **c) Devices on a network or resources like websites** d) Only devices with public IP addresses
6. The syntax for a simple ping is: a) ipconfig /ping IP address b) ping /t IP address **c) ping IP address or website URL** d) trace IP address
7. In the example ping to 192.168.1.254, what does the output indicate about the ICMP packets? a) All packets were lost. b) Only some packets were received. **c) All packets were received.** d) Packets were received out of order.
8. In the example ping to 192.168.1.254, the average time for the ICMP packets was measured in: a) Seconds b) Minutes **c) Milliseconds** d) Microseconds
9. What is the syntax to ping the IP address 10.10.10.10? a) ping/10.10.10.10 b) ping -t 10.10.10.10 **c) ping 10.10.10.10** d) icmp 10.10.10.10

**Task 5**

1. The next recommended room to continue learning is: a) "Intro to Networking Concepts" b) "Networking Fundamentals" c) "Advanced Networking" **d) "Intro to LAN"**

**General Network Concepts (Beyond Specific Tasks)**

1. Which of the following is an example of a network found in everyday life (non-computing)? a) The Internet b) Your phone's Wi-Fi connection **c) A city's public transportation system** d) A website
2. The primary reason for having a phone, according to the text, is to: a) Make calls b) Send text messages **c) Access things** d) Take pictures
3. In computing, a network can be formed by as few as how many devices? a) One **b) Two** c) Three d) Four
4. Networks are integrated into our everyday life for tasks such as: a) Only entertainment b) Only communication **c) Gathering weather data, delivering electricity, and determining right of way** d) Only online shopping
5. The diagram in Task 1 illustrates a network formed by: a) Two devices b) Four devices **c) Three individuals** d) A router and two computers
6. Networks can come in various: a) Colors b) Speeds **c) Shapes and sizes** d) Brands
7. To communicate effectively, devices on a network must be both: a) Fast and secure b) Expensive and reliable **c) Identifying and identifiable** d) Wired and wireless
8. Changing your name is possible, but what is not possible for humans to change, according to the analogy? a) Their address b) Their job **c) Their fingerprints** d) Their friends
9. The MAC address is assigned to the network interface at the: a) Time of purchase b) Time of network connection **c) Factory it was built at** d) Operating system installation
10. The hexadecimal numbering system used in computing has a base of: a) Eight b) Ten **c) Sixteen** d) Twelve
11. The colons in a MAC address are considered: a) Identifiers b) Addresses **c) Separators** d) Indicators
12. If a networked device pretends to identify as another using its MAC address, it is performing: a) Firewall configuration b) Network analysis **c) Spoofing** d) Packet sniffing
13. Poorly implemented security designs might assume that devices talking on a network are: a) Always malicious b) Encrypted **c) Trustworthy** d) Properly configured
14. MAC address control in public Wi-Fi can be used to offer different: a) Security levels b) Types of content **c) Service levels based on payment** d) Connection speeds for all users
15. The interactive lab in Task 3 simulates a: a) Home network b) Corporate network **c) Hotel Wi-Fi network** d) Mobile network
16. In the Task 3 lab scenario, Alice's packets are going through because she has: a) A faster device b) A better IP address **c) Paid for Wi-Fi** d) The administrator's MAC address
17. In the Task 3 lab, the goal is to change Bob's MAC address to the same as Alice's to see if he can: a) Get a different IP address b) Access more websites **c) Access the TryHackMe website** d) Increase his network speed
18. The time taken for ICMP packets to travel is a measure of connection: a) Bandwidth b) Security **c) Performance** d) Encryption
19. Ping comes installed on operating systems like: a) iOS and Android b) ChromeOS and macOS **c) Linux and Windows** d) Solaris and BSD
20. Pinging "8.8.8.8" is a common way to test connectivity to: a) A local router b) A private server **c) Google's public DNS server** d) Your own device
21. The output of a successful ping typically shows the: a) MAC address of the target b) Protocols being used **c) Time taken for replies** d) Number of hops
22. If a ping fails, it could indicate: a) The target device is busy b) The network is congested **c) The connection does not exist or is unreliable** d) The ping command was entered incorrectly
23. The "Intro to LAN" room likely focuses on: a) Wide Area Networks b) Wireless networks **c) Local Area Networks** d) Mobile networks
24. Understanding networking is essential in cybersecurity because networks are: a) Always secure b) Never attacked **c) Embedded in modern-day technology** d) Only used by large corporations
25. The number of devices connected to the Internet is: a) Decreasing b) Staying the same **c) Increasing rapidly** d) Only in the millions
26. A key difference between an IP address and a MAC address is that an IP address is: a) Permanent b) Shorter **c) Logical and can change** d) Physical
27. A key difference between an IP address and a MAC address is that a MAC address is: a) Logical b) Assigned by the ISP **c) Physical and usually permanent** d) Used for routing on the internet
28. The concept of "things connected" applies to: a) Only technology b) Only social relationships **c) All aspects of life** d) Only infrastructure
29. The postal system is given as an example of a: a) Computer network b) Wireless network **c) Non-computing network** d) Secure network
30. Traffic lights are an example of technological devices that form a: a) Personal network b) Home network **c) Network for control and coordination** d) Social network
31. Farming can involve networks through the use of: a) Only human labor b) Traditional methods only **c) Technological devices for data and automation** d) Only small, local connections
32. The Internet is best described as a network of: a) Individual computers b) Large servers **c) Many smaller networks** d) Global users
33. The primary function of IP addresses is: a) Physical identification of devices b) Identifying the manufacturer of a device **c) Logical identification of hosts on a network** d) Controlling access to network resources
34. The primary function of MAC addresses is: a) Logical identification of hosts b) Routing traffic across the internet **c) Physical identification of network interfaces** d) Assigning IP addresses
35. The shortage of IPv4 addresses has been addressed by the introduction of: a) NAT (Network Address Translation) b) Subnetting **c) IPv6** d) DHCP
36. MAC address spoofing is a security concern because it can lead to: a) Increased network speed b) Better network organization **c) Unauthorized access and bypassed security measures** d) More efficient data transfer
37. Ping is a useful tool for: a) Encrypting network traffic b) Configuring network devices **c) Basic network troubleshooting and connectivity testing** d) Managing network security policies
38. Understanding how devices are identified on a network is crucial for: a) Designing website layouts b) Writing software code **c) Network administration and cybersecurity** d) Hardware manufacturing
39. The analogy of "Alice being the messenger" illustrates the role of: a) A firewall b) An end user **c) A gateway or intermediary in communication** d) A network cable
40. The ARPANET project was funded by the: a) National Science Foundation **b) United States Defence Department** c) European Union d) United Nations
41. The invention of the World Wide Web significantly contributed to the Internet's use for: a) Real-time voice communication b) File sharing among researchers **c) Public information sharing and access** d) Secure military communications