**Comptia A+**

To watch the below video, you need to right click on the Hyperlink just below the highlighted task in red color and select the Open Hyperlink option. It will take you to the YouTube where you can watch the concerned video.

You are required to watch the video and answer the Questions asked below.

You need to type answers in the row indicated with “Ans.”

**What are the Wi-Fi standards we use?**

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| **Wi-Fi standards**  <https://drive.google.com/file/d/14T-17941d08mvxchzjgCTlN7UkwrQdYi/view?usp=sharing> | |
| 1 | What is Wi-Fi? |
| Ans. | Wireless Fidelity |
| 2 | What are the wireless technologies we use? |
| Ans. | BLUETOOTH , INFRARED, REDIO, SATALITE , WIFI |
| 3 | What is the speed of 802.11b? |
| Ans. | 54MBPS |
| 4 | What is the distance 802.11b can cover? |
| Ans. | Indoors: 35 m Outdoors: 120/5000 m |
| 5 | In which year 802.11b came into the market? |
| Ans. | ts major commercial breakthrough came in 1999 when Apple introduced the first mass-marketed consumer products with Wi-Fi connectivity, its AirPort wireless base station, and iBook. Thanks to the then-new IEEE 802.11b™ amendment to the original Wi-Fi standard, |
| 6 | What is the frequency range of 802.11b? |
| Ans. | 2.4 or 5 GHz |
| 7 | What is the speed of 802.11a? |
| Ans. | 54 Mbps |
| 8 | What is the distance 802.11a can cover? |
| Ans. | he maximum range of 802.11a wireless was approximately 95 feet with throughput of up to 54 megabits per second, while 802.11b was capable of transmitting up to 150 feet at 11 Mbps. |
| 9 | In which year 802.11a came into the market? |
| Ans. | ter 802.11b because it was not available in products until much later. Chipset vendors took some time to develop products supporting the more complex OFDM and support for the 5Ghz band. |
| 10 | What is the frequency range of 802.11a? |
| Ans. | 5 GHz |
| 11 | What is the speed of 802.11g? |
| Ans. | 54MBPS |
| 12 | What is the distance 802.11g can cover? |
| Ans. | 150 feet and speeds up to 54Mbps compared with the 11Mbps of the 802.11b standard. |
| 13 | In which year 802.11g came into the market? |
| Ans. | EE 802.11g™, or Wi-Fi 3, was introduced in 2003. It allowed for faster data rates of up to 54 Mbit/s in the same 2.4 GHz frequency band as IEEE 802.11b, thanks to an OFDM multi-carrier modulation scheme and other enhancements. |
| 14 | What is the frequency range of 802.11g? |
| Ans. | 2.4 GHz  Different Wi-Fi Protocols and Data Rates |
| 15 | What is the speed of 802.11n? |
| Ans. | 2.4 450 MBPS3 |
| 16 | What is the distance 802.11n can cover? |
| Ans. | 235 feet |
| 17 | In which year 802.11n came into the market? |
| Ans. | Published in October 2009, |
| 18 | What is the frequency range of 802.11n? |
| Ans. | 802.11n supports multi-channel utilization and operates at both 2.4 GHz and 5 GHz bands. The maximum data rate for this wireless networking standard is 600 Mbps and it provides backward compatibility with its predecessors. |
| 19 | What is the speed of 802.11ac? |
| Ans. | 1300 Mbps, |
| 20 | What is the distance 802.11ac can cover? |
| Ans. | up to 100 meters |
| 21 | In which year 802.11ac came into the market? |
| Ans. | compatible devices released in 2013, |
| 22 | What is the frequency range of 802.1ac? |
| Ans. | supports 20 MHz, 40 MHz, 80 MHz, 80+80 MHz (non-continuous, non-overlapping), and 160 MHz, where 20 MHz, 40 MHz, and 80 MHz bandwidths are mandatory, and 80+80 MHz and 160 MHz bandwidths are optional. |
| 23 | What are the things that we are definitely concerned about when it comes to wireless? |
| Ans. | nauthorized access is one of the biggest wireless network security risks because it can allow attackers to gain access to sensitive data and resources, and potentially cause significant damage to the organization. |
| 24 | What are the technologies we use for security for wireless system? |
| Ans. | Wi-Fi Protected Access (WPA), WPA2, and WPA3 |
| 25 | WPA stands for? |
| Ans. | Wi-Fi Protected Access |
| 26 | What are the protocols works behind WPA/WPA2? |
| Ans. | What protocol does WPA2 use?  the Advanced Encryption Standard (AES) cipher |
| 27 | TKIP stands for? |
| Ans. | emporal Key Integrity Protocol) is an encryption method. TKIP provides per-packet key mixing a message integrity and re-keying |
| 28 | AES stands for? |
| Ans. | Advanced Encryption Standard (AES) is a |
| 29 | What do you mean by TKIP? |
| Ans. | TKIP (short for Temporal Key Integrity Protocol) is an encryption method. TKIP provides per-packet key mixing a message integrity and re-keyin |
| 30 | What do you mean by AES? |
| Ans. | The Advanced Encryption Standard (AES) is an algorithm that uses the same key to encrypt and decrypt protected data. |
| 31 | WEP stands for? |
| Ans. | WEP (Wired Equivalent Privacy) is the oldest and most common Wi-Fi security protocol. I |
| 32 | Is WEP secure? |
| Ans. | Wired Equivalent Privacy (WEP) used to be the standard form of encryption, but it's no longer secure, because computing power has improved and hackers can now crack it easily. WEP security encrypts with a static key — one of the biggest reasons it's no longer considered |
| 33 | WEP is replaced with? |
| Ans. | WPA  Next came WPA, or Wi-Fi Protected Access. Introduced in 2003, this protocol was the Wi-Fi Alliance's replacement for WEP. It shared similarities with WEP but offered improvements in how it handled security keys and the way users are authorized. |
| 34 | Which wireless technology offers very fast speed and uses the 5GHz range? |
| Ans. | With its new 5-GHz |
| 35 | Which security technology 802.11ac uses? |
| Ans. | Wi-Fi standard that delivers higher throughput to wireless local-access networks |