9628-06 Level 3 Certificate in Networking and Architecture (for the Level 3 Infrastructure Technician Apprenticeship)
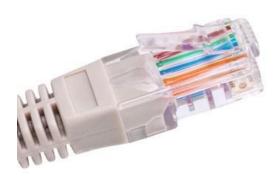9628-306 Networking and Architecture

Sample question paper

Duration: 75 minutes

Candidate's name:

Candidate's enrolment number:

Centre name:

Centre number:

Date:

1 Identify the component in the image below.

a. RJ-45
b. RJ-11
c. LC
d. ST

2 Identify the component in the image below.

a. BNC
b. USB
c. LC
d. ST

3 What is the **maximum** recommended length for a CAT 6 cable when used as a 100BASE-T?

a. 55 metres.
b. 90 metres.
c. 100 metres.
d. 110 metres.

4 Which type of data cable is the **most** secure from electronic interference?

a. CAT 5.
b. CAT 5e.
c. Plenum coated.
d. Fibre Optic.

5 Which one of the following is a characteristic of a CAT 5 cable?

a. Speed of 10 GB/s at 55 metres.
b. Uses a non-standard terminator.
c. Reduced crosstalk due to construction.
d. Electromagnetically shielded.

6 A Campus would utilise which one of the following antennas to link all of its sites?

a. Parabolic.
b. Omni-directional.
c. Point to Multipoint.
d. Multipoint to Multipoint.

7 Which one of the following wireless standards uses the 5GHz band for data rates up to 54Mbps?

a. 802.11a
b. 802.11b
c. 802.11g
d. 802.11n

8 Which one of the following would **most** likely be the cause of users being able to connect to a newly installed WAP but being unable to reach the internet?

a. The device signal strength has been degraded.
b. An incorrect subnet mask has been used on the WAP.
c. Users have selected the wrong encryption type.
d. The signal strength on the WAP is low and packets are dropping.

9 Which technology is described as providing long range connectivity?

a. NFC.
b. RFID.
c. WiMAX.
d. Bluetooth.

10　Which one of the following technologies uses inductance to provide power in a device?

a. NFC.
b. RFID.
c. WiMAX.
d. Bluetooth.

11　Which of these wire encryption standards is the **least** secure?

a. WEP.
b. WEP2.
c. WPA.
d. WPA2.

12　Which command line tool would be used to identify open ports and running services on a host?

a. Ping.
b. Netstat.
c. Tracert.
d. Ifconfig.

13　Which type of wireless site survey (RF Survey) is used to model the characteristics of a wireless network using simulation tools?

a. Active.
b. Passive.
c. Predictive.
d. Static.

14　Which tool should be used to locate a hidden non-fibre network cable within a wall?

a. Multi-meter.
b. Cable tester.
c. Toner probe.
d. Cable certifier.

15　Which one of the following utilities would be used to identify file fragmentation?

a. Protocol analyser.
b. Scandisk.
c. Memtest.
d. Process monitor.

16　Which one of the following will enable the total number of ICMP packets received to be viewed?

a. Netstat -s.
b. Netstat -r.
c. Netstat -n.
d. Netstat -u.

17　Which one of the following is a command line packet sniffer?

a. Netstat.
b. Iostat.
c. TCPdump.
d. Vmstat.

18　Which one of the following Windows tools allows you to identify stopped network services?

a. Task Manager.
b. Perfmon.
c. Sysmon.
d. Activity Monitor.

19　Which one of the following tools would allow you to record actions for use in security incident detection?

a. Task Manager.
b. Perfmon.
c. Sysmon.
d. Tracert.

20　Which one of the following would be used to specify tasks to be completed in a repair facility?

a. Fault Log.
b. Asset Log.
c. Worksheet.
d. Acceptance Test.

21　Which one of the following would be used to determine the suitability of a software application?

a. Fault Log.
b. Asset Log.
c. Worksheet.
d. Acceptance Test.

22 What would be an appropriate response time in an SLA for a Technical Services Team to a failure in an online banking system?

a. 15-30 minutes.
b. 1-2 hours.
c. Same day.
d. Next day.

23 Which type of maintenance is associated with distributing a critical security patch after users have been compromised?

a. Physical.
b. Pro-Active.
c. Reactive.
d. Corrective.

24 Which type of maintenance can be ascribed to a technical services team which uses the Mean Time Between Failures (MTBF) to schedule a program for equipment replacement?

a. Physical.
b. Pro-Active.
c. Reactive.
d. Corrective.

25 Which one of the following would be the **best** solution to improve the processing capabilities of a database server?

a. Additional 16 GB RAM.
b. Upgrade to faster processor.
c. Increase to 1 TB storage.
d. Install large capacity SSD.

26 Which one of the following is the **most** important factor to be considered when purchasing new additional hardware for a current network?

a. Ease of installation.
b. Known maintenance costs.
c. Two year replacement warranty.
d. Compatibility with existing systems.

27 Which one of the following is the **best** option to improve signal strength across the property for a customer having issues with the signal strength on their wireless network?

a. Install a high gain antenna.
b. Run a CAT 5e cable to all of the rooms that have poor signal strength.
c. Install a wireless extender.
d. Install a second wired router in the far end of the property.

28 A USB device is plugged into a MS Windows computer. A message is displayed that the device is installed but may not work properly. Which of the following is the **most** likely cause of the message?

a. The device needs a firmware update.
b. The system needs an updated driver installed.
c. The plugged in device is too slow for the USB port speed.
d. The device is incompatible with the installed version of Windows.

29 Which type of driver is required when installing a new scanner on a MS Windows based system?

a. SURGE.
b. TWAIN.
c. Graphics.
d. Bridge.

30 A previously functioning MS Windows PC is unable to boot to the operating system. Which one of the following is the **most** likely cause?

a. Graphics card failure.
b. Keyboard failure.
c. Network card incorrectly configured.
d. A misconfigured BIOS.

31 Which one of the following provides the **most** secure method to authenticate users?

a. Biometric scanner.
b. Token device.
c. Two factor authentication.
d. Smart card.

32 Which one of the following is considered a physical security method?

a. Locked room.
b. Password.
c. Retinal scanner.
d. CCTV.

33 Which one of the following is considered a Biometric security method?

a. Secure environment.
b. Complex password.
c. Fingerprint scanner.
d. Token device.

34 Which one of the following **best** describes the term 'middleware'?

a. A software package that provides backups for company data.
b. A hardware system that provides a fall over system.
c. A software package that connects two otherwise separate applications.
d. A hardware system that provides network security across the company.

35 Which one of the following is an **essential** feature of 'cloud services'?

a. Complex deployment.
b. Scalability.
c. Employability.
d. Localised services.

36 Which one of the following **best** describes how networking infrastructure benefits IT business systems?

a. It allows more emails.
b. It allows sharing of resources.
c. It allows standalone systems.
d. It allows monitoring of working hours.

37 Which one of the following **best** describes how authentication contributes to IT business systems?

a. Only allows valid users to access the system.
b. Only allows logon between recognised hours.
c. Provides resource sharing across the system.
d. Provides timely access to remote services.

38 Which one of the following is the basic unit for measuring bandwidth in data communication?

a. Megabytes per second.
b. Bytes per second.
c. Bits per second.
d. Terabits per second.

39 What is the hexadecimal representation of the following binary number?

1111

a. F
b. 01
c. A
d. 11

40 Which one is the following IPv4 addresses is known as the loopback address?

a. 10.0.0.1
b. 192.168.0.1
c. 127.0.0.1
d. 169.254.0.1

41 At which layer of the TCP/IP 4 layer model are datagrams forwarded between hosts across the network?

a. Application.
b. Transport.
c. Internet.
d. Network Access.

42 The IP and ICMP protocols operate at which layer of the 7 layer OSI model?

a. Physical.
b. Data Link.
c. Transport.
d. Network.

43 Which one of the following **best** describes the use of the 'Netmask'?

a. A unique device identifier.
b. A default pathway.
c. A network identifier.
d. A network security option.

44 Which one of the following features of a wireless router maps a private IP address to a public IP address?

a. DHCP.
b. NAT.
c. APIPA.
d. Netmask.

45 What is a DNS server used for?

a. Resolving host names.
b. Resolving asset locations.
c. Resolving data errors.
d. Resolving gateway addresses.

46 A DNS client would be registered with the DNS server using which one of the following record types?

a. 'MX' record.
b. 'NS' record.
c. 'A' record.
d. 'CNAME' record.

47 In networking, what does a VLAN provide?

a. Security by segregation.
b. Bandwidth by separation.
c. Immunity to external access.
d. Unlimited devices by virtualisation.

48 What is the default port for the SSH protocol?

a. 22
b. 23
c. 123
d. 4066

49 Which one of the following would prevent users from visiting social media sites?

a. PAT.
b. NAT.
c. Implicit Deny.
d. Content Filter.

50 To ensure users are logging into their systems using the **least** privilege method, which of the following should be done?

a. Allow users to determine their needs and access to resources.
b. Enforce a group policy with the minimum amount of account restrictions.
c. Employ a BIOS password that differs from the domain password.
d. Enforce a policy that allocates permissions based strictly on the user's job role.

NOW GO BACK AND CHECK YOUR WORK

- IMPORTANT -
  Are the details at the top of the answer sheet correct?