Answer ALL questions.

Clearly cross out surplus answers.

Time: 1 hour

The maximum mark for this paper is 30.

Any reference material brought into the examination room must be handed to the invigilator before the start of the examination.

SECTION A - Multiple Choice Question
Circle ONE (1) correct answer from A, B, C, or D for each question.
Each question is worth 1 mark.

Question 1

How do the CPU and RAM interact in a computer system?

A The CPU stores data in RAM permanently

B RAM sends instructions to the CPU for execution

C The CPU fetches data and instructions from RAM to process them

D RAM controls the speed of the CPU

1 mark

Question 2

Which of the following is an example of data retrieval from a computer system?

A Typing a document using a keyboard

B Viewing a photo stored on the hard drive

C Scanning a document into the computer

D Saving a file to a USB drive

1 mark

Question 3

What is the term for the smallest unit of data in a computer?

A Byte

B Bit

C Pixel

D Hertz

1 mark

Question 4

What is the binary equivalent of the denary number 13?

A 1100

B 1110

C 1011

D 1101

1 mark

Question 5

Which of the following best describes the use of hexadecimal in computing?

A It is used to store sound files

B It is used to perform arithmetic operations

C It is used to represent large binary numbers more compactly

D It is used to display images

1 mark

Question 6

A text file contains 2,000 characters. If each character takes 1 byte, how much storage is required?

A 2 kilobytes

B 2 megabytes

C 2 gigabytes

D 2 terabytes

1 mark

Question 7

Which type of storage typically offers the fastest data access speeds?

A DVD

B Hard Disk Drive (HDD)

C Solid State Drive (SSD)

D USB Flash Drive

1 mark

Question 8

What is the first step when installing a new operating system on a computer?

A Connect to the internet

B Format the storage drive

C Install antivirus software

D Open a word processor

1 mark

Question 9

What is the safest way to clean dust from inside a computer?

A   Use a wet cloth

B   Blow into it with your mouth

C   Use a can of compressed air

D   Shake the computer gently

1 mark

Question 10

What is the purpose of assigning an IP address to a network device?

A   To increase internet speed

B   To install software updates

C   To connect to Bluetooth devices

D   To identify the device on a network

1 mark

Question 11

A user reports that they cannot access any websites, but other users on the same network can. What is the most likely cause?

A   The router is offline

B   The user's monitor is broken

C   The user's network adapter is disabled or misconfigured

D   The internet is down for everyone

1 mark

Question 12

Which of the following tools is most appropriate for checking physical connectivity issues?

A   Cable tester

B   Task Manager

C   Ping command

D   IP scanner

1 mark

Question 13

Which of the following is an example of a Personal Area Network (PAN)?

A   A school's computer lab network

B   A city-wide public Wi-Fi system

C   A Bluetooth connection between a phone and wireless earbuds

D   A company's internal email system

1 mark

Question 14

Why are network protocols important in communication between devices?

A   They increase the speed of the internet

B   They ensure devices can understand and interpret data correctly

C   They reduce the size of data packets

D   They prevent devices from overheating

1 mark

Question 15

Which OSI layer is responsible for end-to-end communication and error recovery?

A   Application Layer

B   Data Link Layer

C   Network Layer

D   Transport Layer

1 mark

Question 16

Which of the following best describes the difference between TCP and UDP?

A   TCP is faster but less reliable than UDP

B   UDP is used for web browsing, while TCP is used for video streaming

C   TCP ensures reliable delivery of data, while UDP is faster but does not guarantee delivery

D   UDP encrypts data, while TCP does not

1 mark

Question 17

What does the Domain Name System (DNS) do?

A It encrypts data for secure communication

B It converts IP addresses into MAC addresses

C It translates domain names into IP addresses

D It manages internet traffic speed

1 mark

Question 18

Which of the following is a good strategy to improve both network security?

A Allowing all incoming traffic

B Regularly updating software

C Using public Wi-Fi for sensitive tasks

D Disabling encryption to speed up data transfer

1 mark

Question 19

Which of the following is an example of authentication in network security?

A Encrypting a file

B Using a username and password to log in

C Compressing data before sending

D Installing a printer driver

1 mark

Question 20

What does a Denial of Service (DoS) attack do?

A Overloads a system or network to make it unavailable

B Encrypts files and demands payment

C Sends spam emails to users

D Steals login credentials through fake websites

1 mark

Question 21

Where is a firewall typically placed in a network?

A   Between the keyboard and the monitor   B   Between the user and the internet

C   Inside the printer   D   On the cloud storage server only

1 mark

Question 22

What is a key feature of FIDO passkeys?

A   They require users to remember   B   They use biometric or device-based
     complex passwords   authentication without passwords

C   They rely on email verification only   D   They are only used for Wi-Fi access

1 mark

Question 23

How does Multi-Factor Authentication (MFA) improve security?

A   It allows users to log in faster   B   It requires users to use multiple
                                                 devices at once

C   It adds an extra layer of verification D   It automatically updates all software
     beyond just a password

1 mark

Question 24

What is the purpose of ethical hacking in network security?

A   To test and improve security systems   B   To steal data from competitors
     legally

C   To create viruses for testing   D   To bypass firewalls for fun

1 mark

Question 25

What is the main purpose of blockchain technology?

A	To store large files on the cloud	**B**	To create websites
C	To record transactions in a secure, decentralised way	**D**	To improve Wi-Fi speed

1 mark

Question 26

What is a key benefit of using edge computing in network architecture?

A	It increases the cost of data processing	**B**	It centralises all data in one location
C	It eliminates the need for security protocols	**D**	It reduces latency by processing data closer to the source

1 mark

Question 27

Which of the following correctly matches an OS component with its function?

A	Kernel – displays icons and windows	**B**	System libraries – manage hardware directly
C	User interface – allows users to interact with the system	**D**	File system – runs background processes

1 mark

Question 28

What does multitasking mean in the context of operating systems?

A	Running multiple operating systems on one computer	**B**	The ability of an OS to run multiple processes simultaneously
C	Performing multiple tasks manually at the same time	**D**	Using multiple monitors with one computer

1 mark

Question 29

Which type of memory does the operating system mainly use to run programs and store data temporarily?

A Virtual memory   **B** Cache

C Hard drive   **D** RAM

1 mark

Question 30

In the Discretionary Access Control (DAC) model, who controls access to resources?

A The operating system   **B** The network administrator

C The resource owner   **D** The firewall

1 mark

End of paper