MCQ Questions from Lecture 1

1. What is the primary function of a computer?

   a) Connect to the internet

   b) Process data into useful information

   c) Play games and videos

   d) Store files permanently

   ☑ Answer: b) Process data into useful information

2. Which of the following is NOT part of the basic computer operations?

   a) Input

   b) Processing

   c) Programming

   d) Output

   ☑ Answer: c) Programming

3. Input to a computer can come from:

   a) Keyboard only

   b) Sensors and microphones

   c) Monitor only

   d) Printer only

   ☑ Answer: b) Sensors and microphones

4. Processing involves:

   a) Displaying results

   b) Manipulation of data

   c) Storing data permanently

   d) Typing data

   ☑ Answer: b) Manipulation of data

5. Output from a computer can be in the form of:

   a) Printed documents

   b) Mouse movements

   c) Raw data

   d) Processing instructions

   ☑ Answer: a) Printed documents

6. Memory in a computer is used to:

   a) Hold data temporarily during processing

   b) Store data permanently

   c) Print documents

   d) Enter data

   ☑ Answer: a) Hold data temporarily during processing

7. Which storage device is permanent?

   a) RAM

   b) CPU

   c) Hard disk

   d) Monitor

   ☑ Answer: c) Hard disk

8. Supercomputers are mainly used by:

a) Individual users

b) Banks only

c) Research institutions and large businesses

d) Schools only

☑ Answer: c) Research institutions and large businesses

9. Mainframe computers are typically used for:

a) Personal gaming

b) Handling massive data for many users

c) Small business word processing

d) Portable computing

☑ Answer: b) Handling massive data for many users

10. Which is NOT a type of microcomputer?

a) Desktop

b) Mainframe

c) Laptop

d) Tablet

☑ Answer: b) Mainframe

11. A desktop computer is best described as:

a) Portable and lightweight

b) Stationary and versatile

c) Used only for gaming

d) Having no storage

☑ Answer: b) Stationary and versatile

12. A workstation is most suitable for:

a) Checking email only

b) Video editing and engineering design

c) Playing simple games

d) Word processing only

☑ **Answer: b) Video editing and engineering design**

13. Laptop computers are characterized by:

a) Being non-portable

b) Operating only on AC power

c) Portability and battery use

d) Large size and fixed location

☑ **Answer: c) Portability and battery use**

14. Tablet PCs are:

a) Non-portable

b) A new development in portable computing

c) Only used as phones

d) Unable to run office software

☑ **Answer: b) A new development in portable computing**

15. Smartphones combine features of:

a) TV and radio

b) Cell phone and PDA

c) Laptop and desktop

d) Printer and scanner

☑ **Answer: b) Cell phone and PDA**

16. Personal uses of computers include:

a) Online shopping and gaming

b) Running supercomputers

c) Managing corporate databases

d) Controlling industrial robots

☑ Answer: a) Online shopping and gaming

17. Business uses of computers include:

a) Playing video games

b) Keeping large databases

c) Personal entertainment

d) Educational research only

☑ Answer: b) Keeping large databases

18. Educational uses of computers involve:

a) Only playing games

b) Access to online research and data analysis

c) Industrial manufacturing

d) Banking transactions

☑ Answer: b) Access to online research and data analysis

19. The five components of a computer system are:

a) Mouse, keyboard, monitor, CPU, printer

b) Hardware, software, data, people, procedures

c) Input, output, storage, processing, internet

d) RAM, ROM, CPU, USB, HDMI

☑ Answer: b) Hardware, software, data, people, procedures

20. Computer hardware refers to:

a) Programs and applications

b) Tangible electronic parts

c) Data and information

d) User instructions

☑ Answer: b) Tangible electronic parts

21. Examples of input devices include:

a) Monitor and printer

b) Keyboard and mouse

c) CPU and RAM

d) Hard disk and CD-ROM

☑ Answer: b) Keyboard and mouse

22. The CPU is:

a) An output device

b) A storage device

c) The computer's processing unit

d) A type of software

☑ Answer: c) The computer's processing unit

23. The motherboard is also called:

a) RAM board

b) System board

c) Output board

d) Storage board

☑ Answer: b) System board

24. RAM is:

a) Permanent storage

b) Volatile memory

c) Non-volatile memory

d) An input device

☑ Answer: b) Volatile memory

25. ROM is used to:

a) Store temporary data

b) Hold startup instructions like BIOS

c) Increase processing speed

d) Connect to the internet

☑ Answer: b) Hold startup instructions like BIOS

26. Memory is measured in:

a) Hertz and watts

b) Bytes and kilobytes

c) Volts and amps

d) Pixels and resolution

☑ Answer: b) Bytes and kilobytes

27. Which is an output device?

a) Scanner

b) Microphone

c) Printer

d) Keyboard

☑ Answer: c) Printer

28. Storage devices are different from memory because:

a) They are faster

b) They are volatile

c) They retain data when power is off

d) They process data

☑ Answer: c) They retain data when power is off

29. A peripheral device is:

a) The CPU

b) Added to enhance functionality

c) The operating system

d) Always internal

☑ Answer: b) Added to enhance functionality

30. Software is:

a) Physical parts of a computer

b) A set of instructions

c) Data entered by the user

d) The power supply

☑ Answer: b) A set of instructions

31. System software includes:

a) Microsoft Word

b) Operating systems

c) Games

d) Web browsers

☑ Answer: b) Operating systems

32. An operating system:

a) Prints documents

b) Manages computer hardware and user interaction

c) Scans images

d) Connects to the internet directly

☑ **Answer: b) Manages computer hardware and user interaction**

33. A network operating system is used for:

a) Word processing

b) Managing network devices and security

c) Playing media files

d) Creating spreadsheets

☑ **Answer: b) Managing network devices and security**

34. Utility software examples include:

a) Antivirus programs

b) Microsoft Excel

c) Google Chrome

d) Adobe Photoshop

☑ **Answer: a) Antivirus programs**

35. Application software is used for:

a) Controlling hardware

b) Specific tasks like word processing

c) Booting the computer

d) Storing BIOS

☑ **Answer: b) Specific tasks like word processing**

36. Data becomes information when it is:

a) Stored

b) Used for decisions or actions

c) Entered into the computer

d) Processed but not used

☑ Answer: b) Used for decisions or actions

37. A file is:

a) A hardware component

b) A named collection of data

c) An input device

d) A type of software

☑ Answer: b) A named collection of data

38. Executable files usually have the extension:

a) .txt

b) .exe

c) .doc

d) .jpg

☑ Answer: b) .exe

39. Computers represent data using:

a) Decimal system only

b) Binary system

c) Alphabet letters

d) Analog signals

☑ Answer: b) Binary system

40. Binary digits are:

a) 0 to 9

b) 0 and 1 only

c) A to Z

d) Symbols only

☑ Answer: b) 0 and 1 only

41. The smallest unit of data a computer recognizes is:

a) Byte

b) Kilobyte

c) Bit

d) Nibble

☑ Answer: c) Bit

42. One byte consists of:

a) 4 bits

b) 8 bits

c) 16 bits

d) 32 bits

☑ Answer: b) 8 bits

43. Which code uses 16 bits per character?

a) ASCII

b) Extended ASCII

c) EBCDIC

d) Unicode

☑ Answer: d) Unicode

44. The people component of a computer system includes:

a) Only programmers

b) Only end users

c) End users, programmers, engineers

d) Hardware only

☑ Answer: c) End users, programmers, engineers

45. A procedure in computing is:

a) A piece of hardware

b) A step-by-step set of instructions

c) A type of software

d) An input device

☑ Answer: b) A step-by-step set of instructions

46. Backup procedures are designed to:

a) Increase processing speed

b) Protect against data loss

c) Display output

d) Enter data faster

☑ Answer: b) Protect against data loss

47. Security procedures help to:

a) Speed up the computer

b) Safeguard against intrusion or damage

c) Create new software

d) Print documents

☑ Answer: b) Safeguard against intrusion or damage

48. Why do computers use the binary system?

a) Because it is easy for humans

b) Because electronic circuits easily represent two states

c) Because it uses more digits

d) Because it is slower

☑ **Answer: b) Because electronic circuits easily represent two states**

49. The relationship between hardware and software is:

a) Hardware runs software

b) Software is a physical component

c) They are the same

d) Software does not need hardware

☑ **Answer: a) Hardware runs software**

50. Peripheral equipment is called so because it:

a) Is the most important part

b) Is added externally to enhance functionality

c) Is inside the CPU

d) Cannot be removed

☑ **Answer: b) Is added externally to enhance functionality**

MCQ Questions from Lecture 2

1. What is the main role of the Central Processing Unit (CPU)?

   a) Display graphics

   b) Store files permanently

   c) Process data, execute instructions, and control activities

   d) Connect to the internet

   ☑ Answer: c) Process data, execute instructions, and control activities

2. The CPU is often described as:

   a) The screen of the computer

   b) The heart and brain of the computer

   c) A temporary storage device

   d) An input device

   ☑ Answer: b) The heart and brain of the computer

3. The system unit houses:

   a) Only the monitor

   b) Processor, memory, ports, and add-in boards

   c) Only the keyboard and mouse

   d) Software applications

   ☑ Answer: b) Processor, memory, ports, and add-in boards

4. Which component of the CPU acts like a "traffic cop"?

  a) ALU

  b) Control Unit

  c) RAM

  d) Cache

  ☑ Answer: b) Control Unit

5. The Control Unit is responsible for:

  a) Performing arithmetic calculations

  b) Fetching, decoding, and sending signals for instruction execution

  c) Storing permanent data

  d) Displaying output

  ☑ Answer: b) Fetching, decoding, and sending signals for instruction execution

6. The Arithmetic/Logic Unit (ALU) performs:

  a) Only addition and subtraction

  b) Only logical comparisons

  c) Both arithmetic operations and logical comparisons

  d) Data storage

  ☑ Answer: c) Both arithmetic operations and logical comparisons

7. Primary storage (RAM) is used for:

  a) Permanent storage of files

  b) Storing data and instructions temporarily during processing

  c) Controlling input devices

  d) Executing the operating system only

  ☑ Answer: b) Storing data and instructions temporarily during processing

8. The machine cycle consists of:

   a) Input and output cycles

   b) Instruction cycle and execution cycle

   c) Storage and processing cycles

   d) Control and ALU cycles

   ☑ Answer: b) Instruction cycle and execution cycle

9. During the instruction cycle, what happens in the "fetch" step?

   a) Data is sent to the printer

   b) The control unit retrieves a command from memory

   c) The ALU performs a calculation

   d) Data is stored permanently

   ☑ Answer: b) The control unit retrieves a command from memory

10. What is the purpose of the "decode" step?

   a) To display results

   b) To break down a command into instructions the CPU can understand

   c) To store data in RAM

   d) To connect to external devices

   ☑ Answer: b) To break down a command into instructions the CPU can understand

11. The system clock's role is to:

   a) Display the time on the screen

   b) Provide timing for processor operations

   c) Store clock data

   d) Control internet speed

   ☑ Answer: b) Provide timing for processor operations

12. A clock cycle is:

   a) The time taken to display an image

   b) The time required to turn a transistor off and back on

   c) The time taken to save a file

   d) One hour of computer operation

   ☑ **Answer: b) The time required to turn a transistor off and back on**

13. A bus in a computer is:

   a) A large storage device

   b) A path between components for data transfer

   c) An output device

   d) A type of software

   ☑ **Answer: b) A path between components for data transfer**

14. The system bus connects:

   a) Only external devices like printers

   b) The CPU to other devices on the motherboard

   c) The monitor to the power supply

   d) The keyboard to the internet

   ☑ **Answer: b) The CPU to other devices on the motherboard**

15. The data bus is responsible for:

   a) Carrying memory addresses

   b) Transferring data between CPU, memory, and hardware

   c) Providing electrical power

   d) Executing programs

   ☑ **Answer: b) Transferring data between CPU, memory, and hardware**

16. Registers are:

   a) External storage devices

   b) High-speed memory locations inside the CPU

   c) Part of the hard disk

   d) Used only for internet connection

   ☑ **Answer: b) High-speed memory locations inside the CPU**

17. The size of registers (word size) affects:

   a) The color of the display

   b) The amount of data the CPU can process at once

   c) The speed of the internet

   d) The size of the monitor

   ☑ **Answer: b) The amount of data the CPU can process at once**

18. Cache memory is used to:

   a) Store files permanently

   b) Speed up processing by storing frequently used data close to the CPU

   c) Increase internet bandwidth

   d) Control external devices

   ☑ **Answer: b) Speed up processing by storing frequently used data close to the CPU**

19. Level 1 (L1) cache is located:

   a) On the hard disk

   b) Inside the CPU

   c) On the motherboard

   d) In the power supply

   ☑ **Answer: b) Inside the CPU**

20. Pipelining improves CPU performance by:

   a) Increasing the size of RAM

   b) Allowing the CPU to begin fetching the next instruction before finishing the current one

   c) Reducing the number of transistors

   d) Turning off unused components

   ☑ **Answer: b) Allowing the CPU to begin fetching the next instruction before finishing the current one**

21. Parallel processing involves:

   a) Using one processor to run multiple programs

   b) Using multiple processors to execute a program faster

   c) Processing data sequentially

   d) Storing data in different locations

   ☑ **Answer: b) Using multiple processors to execute a program faster**

22. A port is:

   a) A software application

   b) A connector for plugging in input/output devices

   c) Part of the ALU

   d) A type of memory

   ☑ **Answer: b) A connector for plugging in input/output devices**

23. USB stands for:

a) Universal Serial Bus

b) United System Bus

c) Universal Storage Buffer

d) User System Binary

☑ **Answer: a) Universal Serial Bus**

24. A key feature of USB is:

a) It can only connect one device at a time

b) It is not hot-swappable

c) It can connect up to 128 devices and is hot-swappable

d) It requires the computer to be shut down when connecting devices

☑ **Answer: c) It can connect up to 128 devices and is hot-swappable**

25. Plug and Play allows:

a) Devices to be installed without manual configuration by the user

b) The CPU to overclock automatically

c) Software to be uninstalled easily

d) The computer to turn on by itself

☑ **Answer: a) Devices to be installed without manual configuration by the user**

26. Processing takes place in the:

a) Monitor

b) CPU

c) Printer

d) Keyboard

☑ **Answer: b) CPU**

27. The motherboard:

   a) Only holds the CPU

   b) Connects all computer devices together

   c) Is an output device

   d) Stores permanent data

   ☑ Answer: b) Connects all computer devices together

28. The address bus carries:

   a) Data between CPU and memory

   b) Only memory addresses

   c) Power supply signals

   d) Video signals to the monitor

   ☑ Answer: b) Only memory addresses

29. Increasing the number of wires in a bus:

   a) Slows down data transfer

   b) Has no effect on speed

   c) Increases the speed of data transfer

   d) Reduces power consumption

   ☑ Answer: c) Increases the speed of data transfer

30. A 64-bit processor means:

   a) The processor has 64MB of cache

   b) The processor's registers can handle 64 bits of data at a time

   c) The processor runs at 64 GHz

   d) The processor has 64 pins

   ☑ Answer: b) The processor's registers can handle 64 bits of data at a time