1) Which instruction in the 8051 microcontroller moves data from one register to another without affecting the flags?

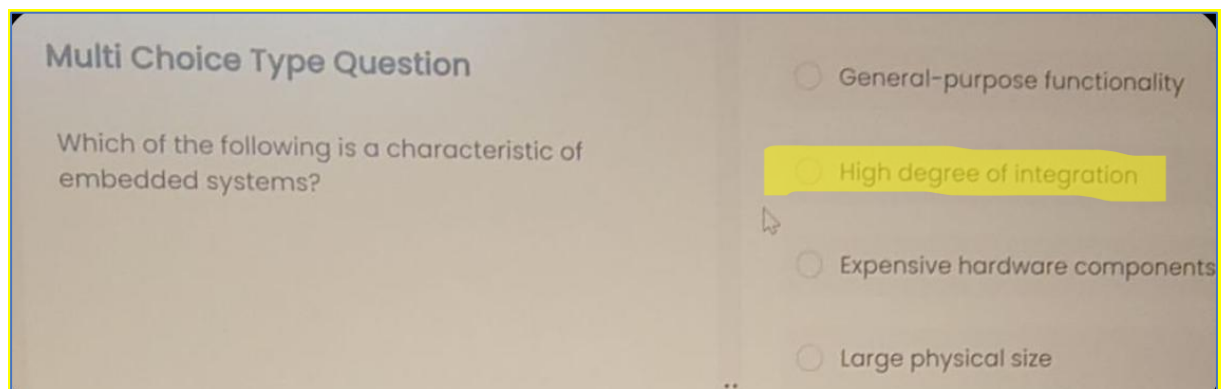ADD A, B

CLR A
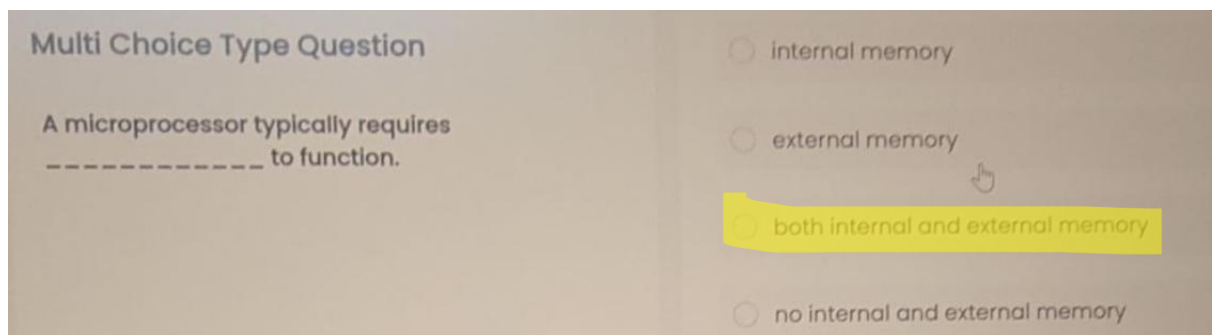
SUBB A,B

MOV A,B
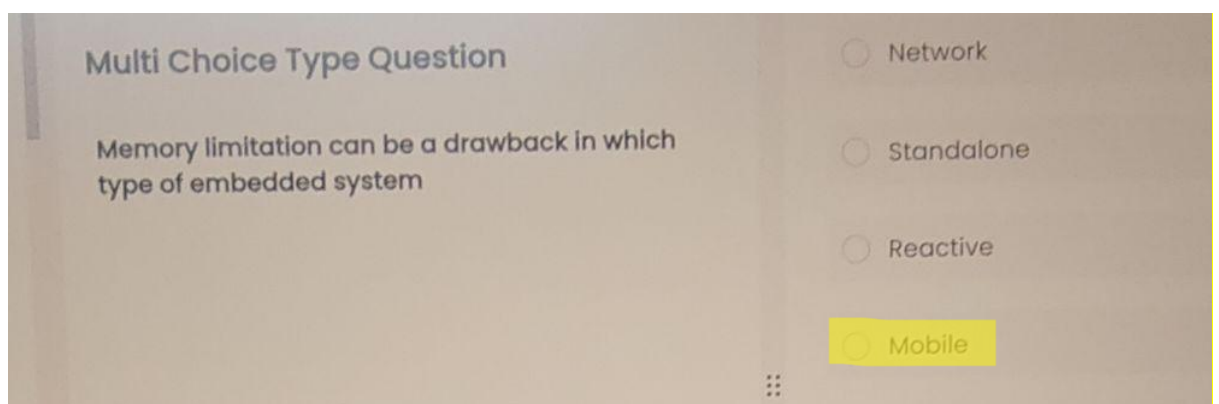
2)

Multi Choice Type Question

Which of the following is a characteristic of embedded systems?

○ General-purpose functionality

○ High degree of integration

○ Expensive hardware components

○ Large physical size

3)

Multi Choice Type Question

A microprocessor typically requires
_ _ _ _ _ _ _ _ _ _ _ _ _ to function.

○ internal memory

○ external memory

○ both internal and external memory

○ no internal and external memory

4)

Multi Choice Type Question

Memory limitation can be a drawback in which type of embedded system

○ Network

○ Standalone

○ Reactive

○ Mobile

5)

Multi Choice Type Question

Describe "clock" in a microcontroller.

○ The time of day

○ The speed at which instructions are executed

○ A built-in alarm

○ The power supply level

6)

Multi Choice Type Question

Describe "clock" in a microcontroller.

○ The time of day

○ The speed at which instructions are executed

○ A built-in alarm

○ The power supply level

7)

Multi Choice Type Question

what are optimized to perform particular task they are intended to perform.

○ Microprocessor

○ Microcontroller

○ 8051

○ Embedded system

8)

Answer

Multi Choice Type Question

ADD A, #3FH represents which type of addressing mode?

9)

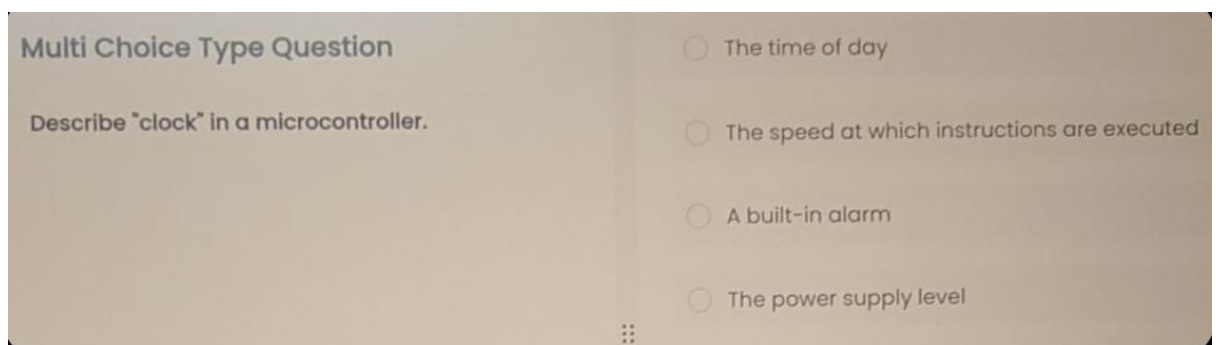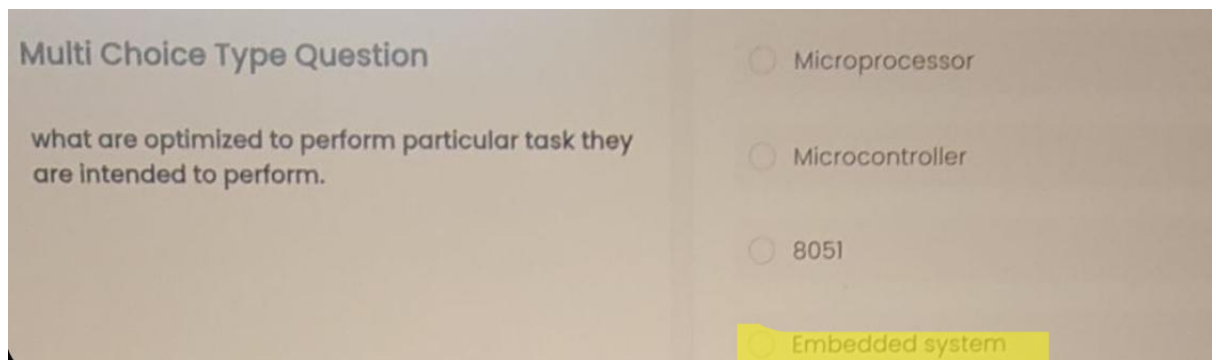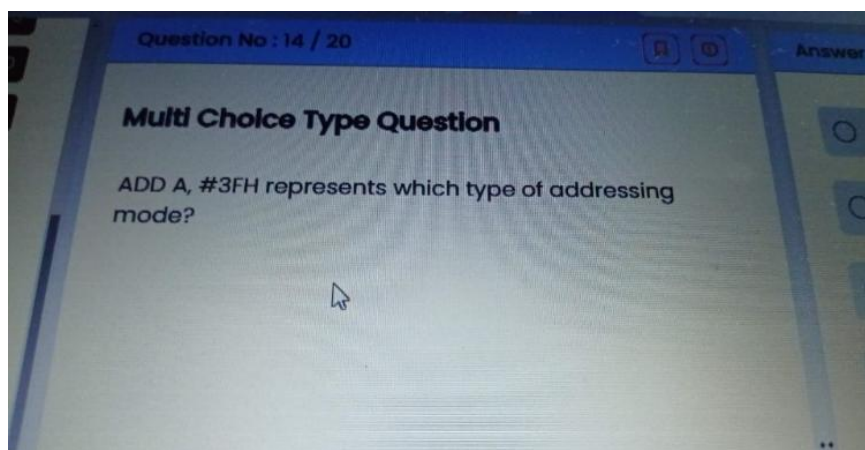## Multi Choice Type Question

What does the 8051 use Port 2 for in addition to general I/O?

○ Timer functions

○ External memory address

○ Serial communication

○ External interrupts

10)

Multi Choice Type Question

Which is the most common example of an embedded system?

○ Desktop computer

○ Smartwatch

○ Supercomputer

○ Cloud server

11)

Multi Choice Type Question

MOV A, @R4 is an example for _____ addressing.

○ Memory Direct

○ Register Direct

○ Register Indirect

○ Immediate

12)

Multi Choice Type Question

Data transfer from I/O to external data memory can only be done with the ---------command.

○ MOV C

○ MOV A

○ MOV @R3

○ MOVX

13)

Multi Choice Type Question

Which port in the 8051 is used for serial data transmission?

- Port 0
- Port 1
- Port 2
- **Port 3**

14)

Multi Choice Type Question

"RLC A" is for

- Rotate bits of the accumulator right through carry
- Rotate bits of the accumulator right
- **Rotate bits of the accumulator left through carry**
- Rotate bits of the accumulator left

15)

Multi Choice Type Question

____ assess the data to measure the output and store it to the memory.

- Sensor
- ADC
- **Processor &ASIC**
- Actuator

16)

Multi Choice Type Question

Which of the following is a part of the microcontroller?

- Power Supply
- Rectifier
- Filter
- **Timer**

17)

Multi Choice Type Question

What type of addressing is used when accessing data through a register?

- ○ Immediate Addressing
- ○ Register Addressing
- ○ Direct Addressing
- ○ Indirect Addressing

18)

Multi Choice Type Question

Which of the following is NOT a feature of real time embedded systems?

- ○ Predictability
- ○ Reliability
- ○ Determinism
- ○ Randomness

19)

Multi Choice Type Question

Which factor is most critical in determining the feasibility of a task set in real time systems?

- ○ Task priority
- ○ Resource availability
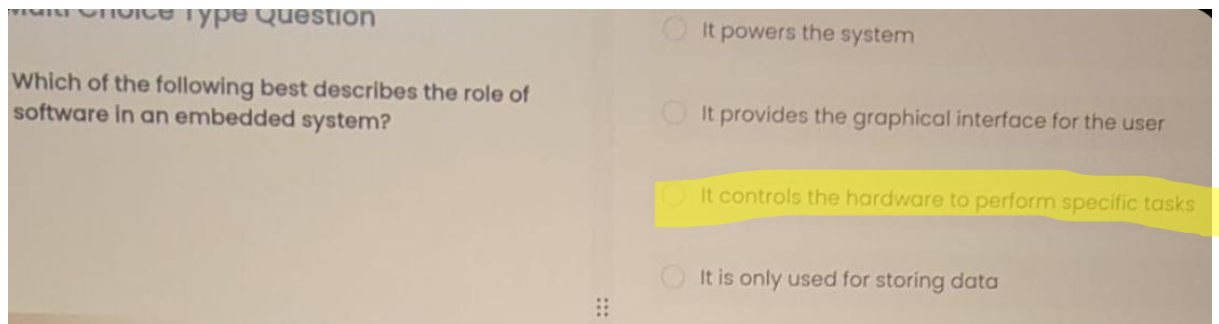- ○ Deadline adherence
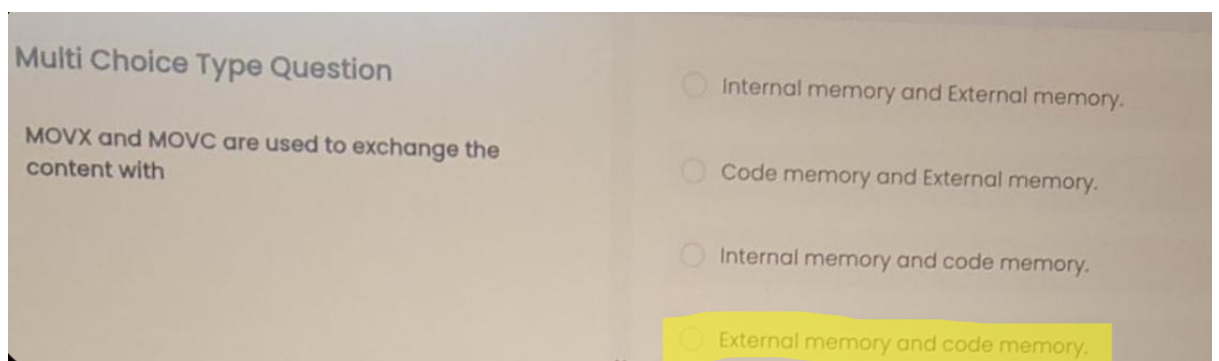- ○ System uptime

20)

Multi Choice Type Question

Which port in the 8051 microcontroller can be used as a bidirectional data bus?

- ○ Port 0
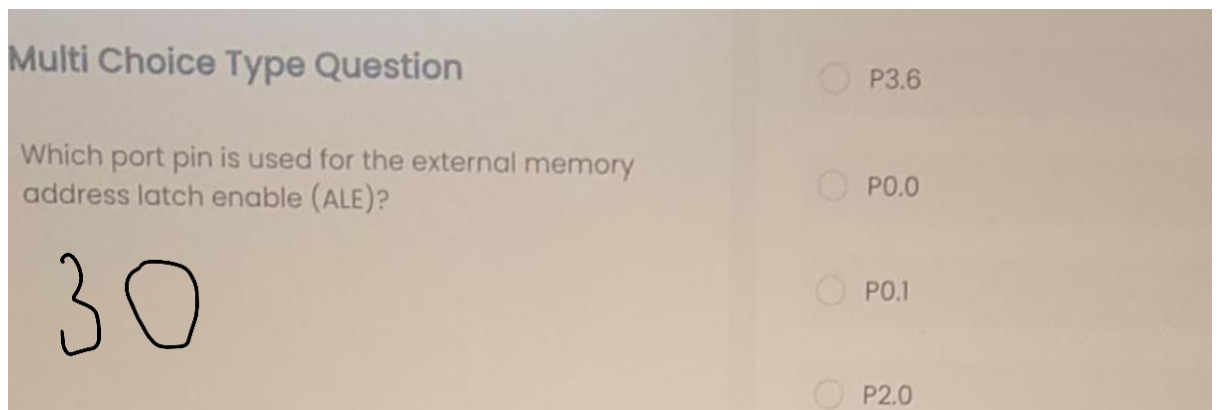- ○ Port 1
- ○ Port 2
- ○ Port 3

21)

Multi Choice Type Question

Which of the following best describes the role of software in an embedded system?

○ It powers the system

○ It provides the graphical interface for the user

○ It controls the hardware to perform specific tasks

○ It is only used for storing data

22)

Multi Choice Type Question

MOVX and MOVC are used to exchange the content with

○ Internal memory and External memory.

○ Code memory and External memory.

○ Internal memory and code memory.

○ External memory and code memory.

23)

Multi Choice Type Question

Which port pin is used for the external memory address latch enable (ALE)?

30

○ P3.6

○ P0.0

○ P0.1

○ P2.0

24)

Multi Choice Type Question

SWAP A is for

○ Swap 8-bit data with the accumulator

○ Swap 8-bit data within the accumulator

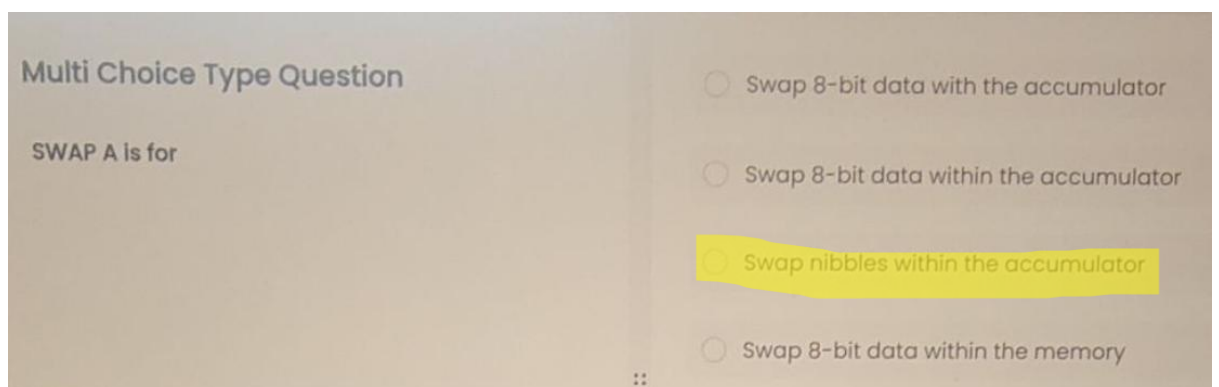○ Swap nibbles within the accumulator

○ Swap 8-bit data within the memory

25)

Multi Choice Type Question

Why is assembly language sometimes used to program microcontrollers?

○ It is easier to write than high-level languages

○ It provides direct control over hardware

○ It is the only language microcontrollers understand

○ It is faster to learn than other languages

26)

Multi Choice Type Question

In which scenario might the Von Neumann architecture be more suitable than the Harvard architecture in an embedded system?

○ When low power consumption is critical

○ When simplicity and cost are priorities

○ When high processing speed is required

○ When separate memory for instructions and data is needed

27)

Multi Choice Type Question

In a firm real-time system, what happens if a task misses its deadline?

○ The task is discarded, but the system continues operating

○ The system crashes

○ The task is re-executed
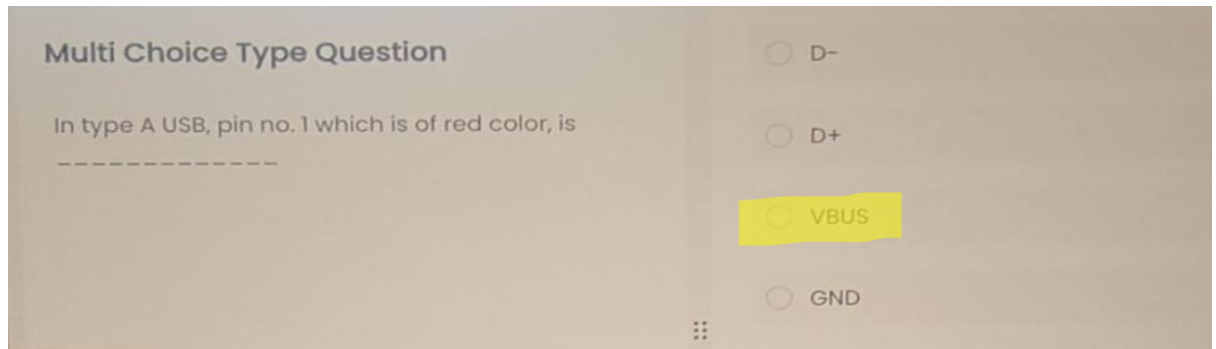
○ The deadline is extended automatically

28)

Multi Choice Type Question
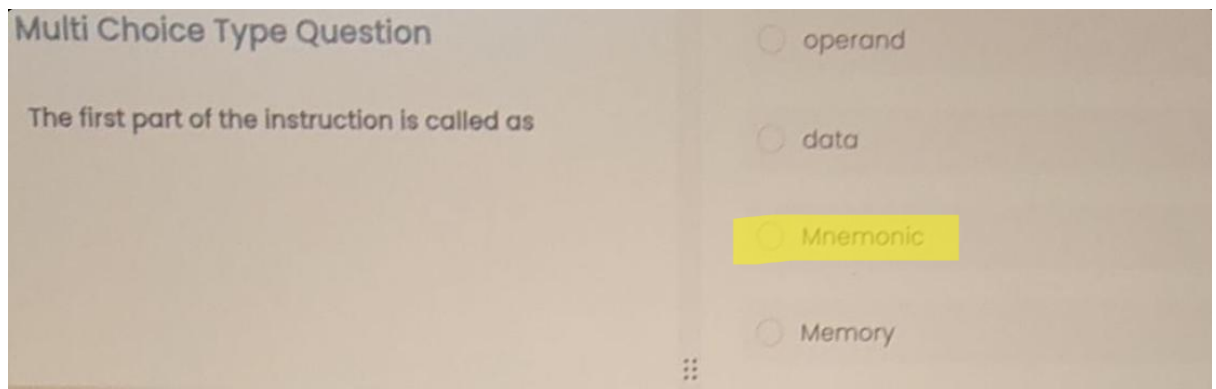
The difference between FPGA and PLD is __

○ FPGA is slower than PLD

○ FPGA has high power dissipation
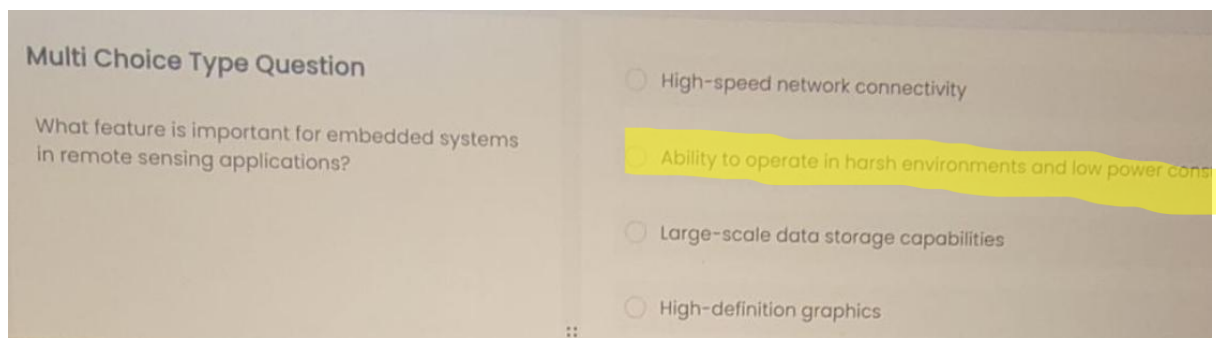
○ FPGA incorporates logic blocks

○ All of the mentioned

29)

Multi Choice Type Question

In type A USB, pin no. 1 which is of red color, is
_____

- ○ D-
- ○ D+
- ○ VBUS
- ○ GND

30)

Multi Choice Type Question

The first part of the instruction is called as

- ○ operand
- ○ data
- ○ Mnemonic
- ○ Memory

31)

Multi Choice Type Question

What feature is important for embedded systems in remote sensing applications?

- ○ High-speed network connectivity
- ○ Ability to operate in harsh environments and low power cons
- ○ Large-scale data storage capabilities
- ○ High-definition graphics

32)

Multi Choice Type Question

Input/output (I/O) ports used for?

- ○ To connect the microcontroller to external devices
- ○ To store data temporarily
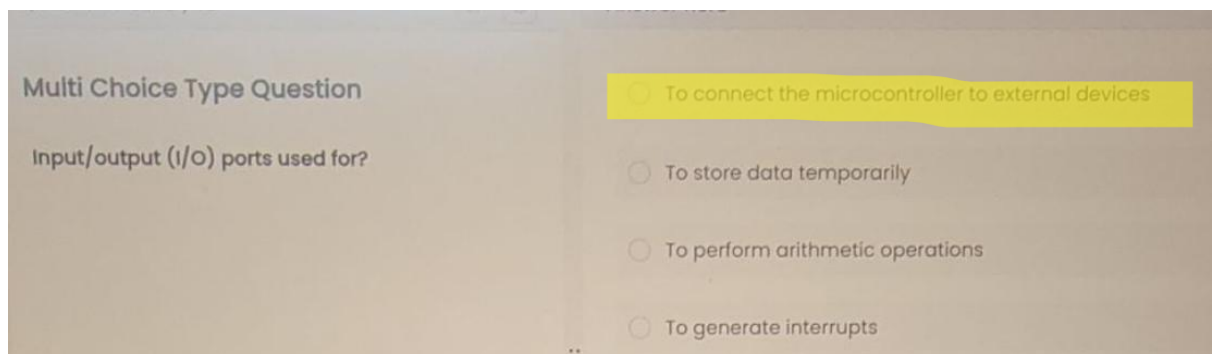- ○ To perform arithmetic operations
- ○ To generate interrupts

33)

Multi Choice Type Question

Which of the following is not an addressing mode in the 8051?

- ⬜ Register Indirect Addressing Mode
- ⬜ Implied Addressing Mode
- ⬜ **Memory Addressing Mode** *(highlighted)*
- ⬜ Direct Addressing Mode

34)

Multi Choice Type Question

What is a typical power supply feature of embedded systems?

- ⬜ High voltage AC power supply
- ⬜ **Low voltage DC power supply** *(highlighted)*
- ⬜ Battery or low power adapter
- ⬜ Continuous power generation unit

35)

Multi Choice Type Question

Input/output (I/O) ports used for?

- ⬜ **To connect the microcontroller to external devices** *(highlighted)*
- ⬜ To store data temporarily
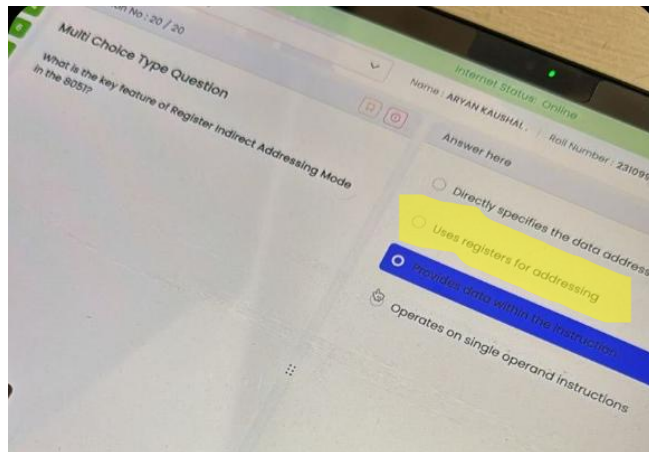- ⬜ To perform arithmetic operations
- ⬜ To generate interrupts

36)

Multi Choice Type Question

Which port in the 8051 microcontroller can be used as a bidirectional data bus?

- ⬜ Port 0
- ⬜ **Port 1** *(highlighted)*
- ⬜ Port 2
- ⬜ Port 3

37)

Multi Choice Type Question

What is the key feature of Register Indirect Addressing Mode in the 8051?

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Answer here

○ Directly specifies the data address

○ Uses registers for addressing

● Provides data within the instruction

○ Operates on single operand instructions

38)

Multi Choice Type Question

In byte by byte division the quotient is placed in ------

○ Register B

○ Accumulator

○ Memory Address

○ Data Register