Module 4 Quiz

TOTAL POINTS 8

1. Which of the following does **NOT** provide observability in a system?   1 point

   ○ An LED connected to a wire in the circuit

   ○ A printf() statement in a C program

   ○ A breakpoint in an Arduino sketch

   ⦿ A switch connected to an Arduino input pin

2. What is meant by the expression "run control of the target"?   1 point

   ⦿ The ability to stop and start the execution of the target microcontroller

   ○ The ability of the target microcontroller to control its own inputs

   ○ The ability to control the inputs to the target microcontroller

   ○ The ability to control the outputs of the microcontroller

3. What is **NOT** an advantage of using a remote debugger?   1 point

   ○ Remote debugging requires an extra communication channel for debugging

   ⦿ Remote debugging allows control of registers and memory

   ○ Remote debugging allows good run control

   ○ Remote debugging provides excellent functional accuracy

4. What is **NOT** a feature of an embedded debug interface?   1 point

   ○ Extra pins are needed to support debugging

○ Breakpoints and watchpoints are supported

○ Automatic test generation is commonly supported

● On-the-fly memory access is supported

5. Which of the following is **NOT** an advantage of the UART protocol?   1 point

● Higher data transfer rates are typically achieved compared to a parallel protocol

○ A shared clock is not required

○ Fewer pins are needed than using a parallel protocol

○ Fewer wires are needed for communication as compared to a parallel protocol

6. Which of the following statements is **NOT** true about the UART protocol?   1 point

● The data transmission rate is equal to the baud rate

○ The bit duration is determined by the baud rate

○ The baud rate is the maximum number of transitions per second

○ The bit duration is the inverse of the baud rate

7. Synchronization is performed in the UART protocol based on the timing of the Start bit.   1 point

● True

○ False

8. An error in bit transmission (perhaps due to noise) may not be detected, even if a parity bit is used.   1 point

○ True

● False

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