

Easy

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Consider the following statements: 1. Accumulator is used for arithmetic and logic operations. 2. Program Counter holds the address of next instruction. 3. Stack Pointer

A**1 and 2 only****Correct****B****2 and 3 only****C****1 and 3 only****D****1, 2 and 3**

Correct Answer: A

Full Detailed Explanation

Correct Answer: A - 1 and 2 only
Quick Concept Explanation The classic 8051 is an 8-bit Harvard-style microcontroller with separate code and data spaces. On reset the stack pointer is 07H, so the first PUSH stores at 08H. Key relation: Reset SP=07H; classic internal RAM=128 bytes; standard ROM=4 KB. Exam focus: Remember 07H for stack pointer reset. Common trap: 00H is not the reset value of the 8051 stack pointer.
Statement-wise Verification
Statement 1 - Correct. Accumulator is used for arithmetic and logic operations. Remember 07H for stack pointer reset.
Statement 2 - Correct. Program Counter holds the address of next instruction. The standard core has 4 KB on-chip program ROM and 128 bytes internal RAM, supports external memory, multiple interrupts and configurable interrupt priority.
Statement 3 - Incorrect. Stack Pointer points to 00H on reset in 8051 Microcontroller. The classic 8051 stack pointer resets to 07H.
Core Concept The classic 8051 is an 8-bit Harvard-style microcontroller with separate code and data spaces. The standard core has 4 KB on-chip program ROM and 128 bytes internal RAM, supports external memory, multiple interrupts and configurable interrupt priority. On reset the stack pointer is 07H, so the first PUSH stores at 08H.
Formula / Key Relationship Reset SP=07H; classic internal RAM=128 bytes; standard ROM=4 KB.
Why the Other Options Are Wrong Option B is incorrect because