- 1. Which microcontroller is known for its 16-bit architecture?
- a) 8051
- b) 8096
- c) PIC16
- d) AVR

Answer: b) 8096

Explanation: The 8096 microcontroller is known for its 16-bit architecture, offering enhanced performance and capabilities compared to 8-bit microcontrollers like the 8051.

- 2. What is the primary function of a microcontroller's functional block-diagram?
- a) Representing physical dimensions
- b) Illustrating software algorithms
- c) Depicting hardware components and their interconnections
- d) Showing programming syntax

Answer: c) Depicting hardware components and their interconnections

Explanation: A functional block-diagram of a microcontroller illustrates the various hardware components and their connections, aiding in understanding the architecture and design of the microcontroller.

- 3. Which register in the 8096 microcontroller stores the status of memory operations?
- a) Instruction Register
- b) Program Counter
- c) Stack Pointer

## d) Memory Status Register

Answer: d) Memory Status Register

Explanation: The Memory Status Register in the 8096 microcontroller stores the status of memory operations, providing information about memory-related activities.

- 4. What type of addressing modes are commonly supported by microcontrollers?
- a) Fixed
- b) Variable
- c) Immediate
- d) All of the above

Answer: d) All of the above

Explanation: Microcontrollers commonly support various addressing modes, including fixed, variable, and immediate modes, to facilitate versatile programming and data manipulation.

- 5. Which feature distinguishes the 8096 microcontroller from its predecessors in terms of memory capacity?
- a) Increased RAM
- b) Expanded ROM
- c) Enhanced cache
- d) All of the above

Answer: d) All of the above

Explanation: The 8096 microcontroller typically offers increased RAM, expanded ROM, and enhanced cache compared to its predecessors, enabling it to handle more complex tasks and

store larger programs.

- 6. Which register in the 8096 microcontroller is responsible for controlling parallel ports?
- a) Instruction Pointer
- b) Control Register
- c) Status Register
- d) Data Register

Answer: b) Control Register

Explanation: The Control Register in the 8096 microcontroller is responsible for controlling parallel ports, allowing the configuration and management of parallel input/output operations.

- 7. Which instruction set classification does the 8096 microcontroller belong to?
- a) CISC
- b) RISC
- c) Hybrid
- d) None of the above

Answer: a) CISC

Explanation: The 8096 microcontroller belongs to the Complex Instruction Set Computer (CISC) architecture, characterized by a large and diverse instruction set with complex instructions.

8. What is a primary advantage of using 16/32 bit PIC microcontrollers?

- a) Lower power consumption
- b) Higher processing speed
- c) Reduced code size
- d) Enhanced compatibility

Answer: b) Higher processing speed

Explanation: 16/32 bit PIC microcontrollers typically offer higher processing speed compared to their 8-bit counterparts, making them suitable for applications requiring faster execution of tasks.

- 9. Which register in the 8096 microcontroller stores the control information for various operations?
- a) Data Register
- b) Control Register
- c) Status Register
- d) Program Counter

Answer: b) Control Register

Explanation: The Control Register in the 8096 microcontroller stores control information for various operations, allowing the configuration and management of specific functionalities.

- 10. What distinguishes DSPIC microcontrollers from standard PIC microcontrollers?
- a) Higher clock frequency
- b) DSP-oriented features
- c) Larger memory capacity
- d) Enhanced power efficiency

Answer: b) DSP-oriented features

Explanation: DSPIC microcontrollers are specifically designed with digital signal processing (DSP) capabilities, offering specialized features and instructions optimized for DSP applications, unlike standard PIC microcontrollers.