

Multiple Choice: Choose the best answer from the list given, write down the letter of your answer. Use lowercase letters.

- a. First statement is true, second statement is true**
- b. First statement is false, second statement is true**
- c. First statement is true, second statement is false**
- d. First statement is false, second statement is false**

1. The instruction set contains one type of instruction that transfers information to an I/O device (OUT) and another to read information from an I/O device (IN). Instructions (INS and OUTS, found on all versions except the 8086/8088) are also provided to transfer strings of data between the memory and an I/O device.

Answer: a

2. The 16-bit I/O address in CX is called a variable address because it is stored in a DX and then used to address the I/O device. Other instructions that use DX to address I/O are the INS and OUTS instructions.

Answer: b

3. In the memory-mapped I/O scheme, any instruction that references memory can accomplish the transfer. Both isolated and memory-mapped I/O are in use.

Answer: a

4. The most common I/O transfer technique used in the Intel microprocessor-based system is isolated I/O. The term isolated describes how the I/O locations are isolated from the memory system in a separate I/O address space.

Answer: a

5. The signals indicate that an I/O port address which appears on the address bus, is used to select the I/O device. In the personal computer isolated I/O ports are used for controlling peripheral devices.

Answer: a

6. A memory-mapped I/O device is treated as a memory location in the memory map. The main disadvantage of memory-mapped I/O is that any memory transfer instruction can be used to access the I/O device.

Answer: a

7. The main disadvantage is that a portion of the memory system is used as the I/O map. Another advantage is that the and signals have no function in a memory mapped I/O system and may reduce the amount of circuitry required for decoding.

Answer: a

8. Input or output devices that are connected to computer are called peripheral devices. These devices are designed to read information into or out of the memory unit upon command from the CPU and are considered to be the part of computer system.

Answer: a

9. Peripherals connected to a computer need special communication links for interfacing with CPU. In computer

system, there are special hardware components between the CPU and peripherals to control or manage the input-output transfers. Answer: a

10. The strobe pulse and handshaking method of asynchronous data transfer are restricted to I/O transfer. In fact, they are used extensively on numerous occasions requiring transfer of data between two independents. Answer: b