

**BRAC UNIVERSITY**  
**Department of Computer Science and Engineering**

Examination: Quiz  
Duration: 35 minutes

Semester: Summer 2023  
Full Marks: 15

# CSE 360: Computer Interfacing

Name:

ID:

Section:

1. **(CO3)** Suppose, we connected a microphone device with the **Port A**. In which mode the port A is? **Explain** the step by step process taking place when there is data communication between the microphone and the microprocessor mentioning the required pins with the **timing diagram**. **[5 Marks]**
2. **(CO3)** Considering an external memory is connected to the IC 82c55. Is it possible to connect a mouse and 1 LED to the interfacing IC at the same time? **Write** the reasons to support your claim. **[3 Marks]**

3. **(CO3)** Suppose, a soundbox is connected to the IC 82c55 port A. Also, a scanner and 2 LEDs are connected to the Interfacing IC as well. **Write** the control word to configure the IC. **[3 Marks]**

4. Suppose, the port B of 82C55 is connected to a speaker. Which of the following set of pins will help to play music?

- a) Group A pins
- b) Group B pins
- c) Port B pins, PC0, PC1, PC2
- d) PB0 - PB7, PC1, PC2, PC3

5. Suppose a digital tab is connected to the port A of 82C55 and port A is acting as an input port. Now if the microcontroller wants to send data to the tab, what will cause the change of port A acting as an output port?

- a) Control bits
- b) disconnecting the pendrive and reconnecting it again
- c) Clock pulse
- d) reset of 82C55

6. Suppose you want to program the control register, which one of the following control signals should be True?

- a)  $R'=0$ ,  $W'=1$ ,  $CS'=0$ ,  $A0=1$ ,  $A1=1$ .
- b)  $R'=1$ ,  $W'=0$ ,  $CS'=1$ ,  $A0=1$ ,  $A1=1$
- c)  $R'=1$ ,  $W'=1$ ,  $CS'=0$ ,  $A0=1$ ,  $A1=1$
- d)  $R'=1$ ,  $W'=0$ ,  $CS'=0$ ,  $A0=1$ ,  $A1=1$

7. What does the following control word represent, 00100000?

- a) The CPU is writing to Port A and reading from Port C.
- b) PC1 is set to 1
- c) PC0 is set to 0
- d) Port A mode 1 and in output