BRAC UNIVERSITY
Department of Computer Science and Engineering

Examination: Quiz   Semester :Summer 2022
Duration: 35 minutes   Full Marks: 15

CSE 360: Computer Interfacing

Name: Kazi Md. Al-Wakil   ID: 19301051   Section: 2

1. Consider the following two cases,

enable	input	output
O	X	Z
1	O	O
1	1	1

Case1: data is being output in the databus from 2 devices
Case2: 2 output device getting input from databus
Which case will cause bus conflict and why? Explain the solution of the conflict using the bus tristate Table. **[4 Marks]**

Ans: Case 1 will cause bus conflict because here two input devices are trying to give output to the databus.

The solution for this problem is tri-state.
In the this method, there is a pin called 'enable' pin. If enable pin is '1' then the input device will be allowed to write data to the databus. Also, the other device's enable pin will be '0'. This is called high impedence state. In high impedence state, the output wire of the input device gets a lot resistance, hence, the device is being freed from influencing the whole circuit. In this state, no matter what the input is, it won't be passed into the data bus. Hence, the conflict will be resolved.

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2. Which devices use Ethernet Port? What are the advantages and drawbacks of this port? **[4 Marks]**

Ans: Ethernet port is a for network hardware interface. Our most used computers, Laptops have ethernet port.

Ethernet port follows serial transmission.

Now, Advantages of Ethernet port:
① Using this port we can communicate with other devices and wit also can communicate with the whole world.
② Ethernet ports can handle speed from 10mbps to 10Gbps.
Though, higher transmission speed is provided for large industries like data streaming. As a client we receive only 10mbps to 100 mbps.

Drawbacks:

① ~~If~~ If twisted pair cable is used then, it serves only 100 meters. After 100 meter, the signal loss is noticable.

② As ethernet port follows serial transmission, the speed ~~thus~~ has been compromised and it focused more on reliable data transmission.

③ Environment can affect the signal transmission speed.

④ These are the advantages and drawbacks of ethernet port.

3. How many clock cycles are required for a 64 bit-Parallel Transmission to send 888 byte data? [1 byte = 8 bit] **[4 Marks]**

As, in parallel Transmission, 64-bit will transmit in one clock pulse. or cycle.

We have 888 bytes = 888 × 8 bits

So, the number of clock cycles needed are:

$$\frac{888 \times 8}{64} = \boxed{\qquad} \ (Ans.)$$

[P.s: mam, I don't have my calculator with me.

4. Which is Plug and Play Port? USB is the plug and play port

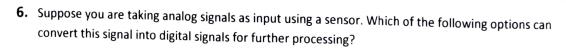~~a) PS2~~   b) ✓ USB   c) 36 Pin Parallel Connector   d) DB9

5. Suppose there are three components: CPU, Main Memory and a Monitor are connected. Now which of the following statement is true:

a) CPU is connected with keyboard via internal bus

b) Memory sends address to CPU through internal address bus for addressing purpose

c) ✓ CPU is connected with monitor via external bus

6. Suppose you are taking analog signals as input using a sensor. Which of the following options can convert this signal into digital signals for further processing?

a) Microcontroller   b) Driver Circuit

c) ✓ Calibration Circuit   d) Peripheral device