You may use your yellow reference sheet of Intel opcodes, and any notations you may have put on it. No other resources are permitted.

The quiz will also contain concepts covered in previous parts of the course.

1. Explain how to use **int** **21h** and **int** **10h** instructions.
2. Explain what happens when an interrupt occurs.
3. Be able to draw all the logic gates.
4. Be able to show how a full adder can be constructed from logic gates.
5. Draw the gate diagram for an RS flipflop.
6. Draw the gate diagram for a D flip-flop.

1. Show how to implement a 4-bit ripple-carry adder from four 1-bit full adders
2. An ASCIIZ string is a string that ends with a 0 byte; for example

**str db "THIS IS AN ASCIIZ STRING",0**

Write a procedure **length** that receives the address of an ASCIIZ string in dx, and returns its length in cx.