

Microprocessors – Tutorial 02

#	Student ID	Student Name	Grade (10)
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Questions:

1. The 80286 addresses registers that are 8 and _____ bits wide.
2. The extended BX register is addressed as _____.
3. What is the purpose of the IP/EIP register?
4. Will an overflow occur if a signed FFH is added to a signed 01H?
5. Which flag bit controls the INTR pin on the microprocessor?
6. What is the purpose of a segment register in the real mode operation of the microprocessor?
7. Find the memory address of the next instruction executed by the microprocessor, when operated in the real mode, for the following CS:IP combinations:
 - (a) CS = 1000H and IP = 2000H
 - (b) CS = 2000H and IP = 1000H
 - (c) CS = 2300H and IP = 1A00H
 - (d) CS = 1A00H and IP = B000H
 - (e) CS = 3456H and IP = ABCDH
8. Real mode memory addresses allow access to memory below which memory address?

Answers:

1. 16

2. EBX

3. Holds the offset address of the next step in the program.

4. No, if you add +1 and -1 you have zero, which is a valid number.

5. The I-flag.

6. The segment register addresses the lowest address in a 64K memory segment.

7.

(a) 12000H

(b) 21000H

(c) 24A00H

(d) 25000H

(e) 3F12DH

8. DI