CMPS-2240 Quiz-9 name _____

2240/9/quiz9.txt or **2240/9/quiz9.jpg**

1. Write two statements in x86 assembly, using only push and pop, that will put the value 1 into register RAX.

2. Look at the following x86 statements. Just after the statements execute, what value will the EAX register hold.

```
xor EAX, EAX   ; zero the EAX register
mov AH, 1      ; move 1 to AH register
shr AX, 1      ; bit-shift AX register one to the right
```

3. On a 64-bit processor, what is the size of the AH register?

   A. It depends on the size of EAX.
   B. 32-bits
   C. 16-bits
   D. 8-bits

4. Describe exactly what the following x86 command does.

```
dec eax
```

5. Write two x86 statements that will accomplish the following pop operation, without using pop.

```
pop eax
```

6. Write the following x86 statement using AT&T syntax.

```
mov eax, [ebx]
```

7. Your 64-bit x86 program has a function that returns one value to the caller. What register should you store the return value in?

   A. rbx
   B. ret
   C. rax
   D. rdi

8. What does the following x86 instruction do?

```
lea eax, [ebx]
```

   A. moves ebx into eax
   B. moves eax into ebx
   C. moves the value at memory address ebx into eax
   D. moves eax the memory address contained in ebx

9. What does the following x86 assembly code do?

```
section .rodata
display db "Go Roadrunners",10,0
```

A. creates a read-only display named db.
B. stores a string in program memory.
C. displays the words "Go Roadrunners".
D. loads a string into the db register.

10. When you see the following statement, what is most likely true?

```
add BYTE PTR [edi], 10
```

A. it is a 64-bit program
B. it is a 32-bit program
C. the edi register holds an address.
D. 10 is added to the edi register.