

Note: This assignment must be completed without the aid of computers, tablets, cell phones, etc.

1. What is decimal number 4023 in:

Binary _____

Hex _____

2. What is binary number 11000111101 in hexadecimal?

3. Implement the following if-else statement in IA-32 assembly language, ensure the short circuit is implemented correctly and the implementation is as efficient as possible

```
if (variable1 != 0 && variable2 >= 1) {  
    /* CodeBlock One */  
} else {  
  
    /* CodeBlock Two */  
}
```

4. Implement the following if-else statement in IA-32 assembly language as efficient as possible

```
if (variable < 15) {  
    /* CodeBlock One */  
} else if (variable < 35) {  
    /* CodeBlock Two */  
} else {  
    /* CodeBlock Three */  
}
```

5. Implement the following if-else statement in IA-32 assembly language, ensure the short circuit is implemented correctly and the implementation is as efficient as possible

```
if (variable1 <= 65 || variable2 > 91) {  
    /* CodeBlock One */  
} else {  
  
    /* CodeBlock Two */  
}
```

6. Implement the following if statement in IA-32 assembly language, ensure the short circuit is implemented correctly

```
if ((variable1 <= 65 && variable2 > 91) || variable3 == 0) {  
    /* CodeBlock */  
}
```