Problem FC-6 (3 parts) Compound Logical Predicates

Part A Turn this compound predicate if-then-else statement into the equivalent nested if-then-else statement which does *not* use compound predicates (i.e., do not use the && and || operators).

```
if ((a==3) && (b>0) || (c<10))
   z = 10;
else
   z = 5;
```

Equivalent C code:

```
if (a==3)
   if (b>0)
      z = 10;
   else if (c<10)
      z = 10;
   else
      z = 5;
else if (c<10)
   z = 10;
else
   z = 5;
```

Part B Write a C code fragment that loops while the logical expression below is true. Assume A, B, C, D, and E are variables, and the dot represents logical AND and the plus represents logical OR.

$$(A \geq B) \cdot (C \neq D) + E$$

```
while (  (A >= B) && (C != D) || E  ) {
   …
}
```

Part C Turn this compound predicate if-then-else statement into the equivalent nested if-then-else statement which does *not* use compound predicates (i.e., do not use the && and || operators).

```
if ((a==3) && (b>0) || (c<10))
   z = 10;
else
   z = 5;
```

Equivalent C code:

```
if (a==3)
   if (b>0)
      z = 10;
   else if (c<10)
      z = 10;
   else
      z = 5;
else if (c<10)
   z = 10;
else
   z = 5;
```