C Grammar

In English several sentences can be combined into 1 using conjunctions.

In C several statements can be combined into 1 using { and }.

Analogy imperfect: in C we would have statements nested inside statements.
C Grammar

if (some condition)
  statement1
else
  statement2

where statement is one of
  assignment
  function call
  return
  if [else]  course standards permit this for statement2 if ...
  compound  course standards permit this
  switch
  break
Conditional expressions

C has no max function for ints. Instead, use

\[ a > b \ ? \ a \ : \ b \]

which means if \( a > b \) “return” \( a \), else “return” \( b \)

This would be used inside an expression, e.g.

\[ \text{maxab} = a > b \ ? \ a \ : \ b \]

More generally, the syntax is

\[ expr1 \ ? \ expr2 \ : \ expr3 \]
Which of the following gives a different result?

A if (x > 1)
   k++;
   if (x > 2) k++;
else
   k--;
B if (x > 1)
   k++;
   if (x > 2) k++;
else
   k--;
C if (x > 1)
   {
     k++;
     if (x > 2) k++;
     k--;  }
else
   k--;
D if (x > 1)
   {
     k++;
     if (x > 2) k++;
     k--;  }
   else
     k--;  l pt
Which of the following cannot be a label for a switch statement?

A. ‘x’
B. x
C. 3
D. ‘3’
E. 3 + 3
Which is correct C?

A. minab = if (a < b) a; else b
B. minab = a < b ? a : b   1 pt
C. minab = a < b ? a ; b
D. minab = a < b : a ? b
E. minab = a < b : a ; b
In which library is `isdigit`?

A. `stdio.h`
B. `stdbool.h`
C. `stdlib.h`
D. `ctype.h` 1 pt