

Quiz (Electronegativity and Bond Polarity)

1. The following table gives the electronegativity values of five elements, A to E:

Element	Electronegativity value
A	3.98
B	2.58
C	2.55
D	2.19
E	0.82

- (a) Which element is not likely to form a covalent bond? Explain briefly.
- (b) Which pair of elements is likely to form the most polar covalent bond?
- (c) Which pair of elements is likely to form the least polar covalent bond?
2. State whether each of the following bonds is polar or non-polar. Use the δ^+ and δ^- signs to indicate the partial charges that exist in those polar bonds.
- (a) C—Cl
- (b) N—Cl
- (c) C—S
- (d) F—O

Suggested Answer

1. (a) *E*.
It has a very low electronegativity value and is probably a metal which is not likely to form a covalent bond.

(b) *A* and *D*

(c) *B* and *C*
2. (a) Polar; $\delta^+C-Cl\delta^-$

(b) Polar; $\delta^+N-Cl\delta^-$

(c) Polar; $\delta^+C-S\delta^-$

(d) Polar; $\delta^-F-O\delta^+$