Instructions: Read the directions to each type of question carefully.

1. Fill in the chart below with the appropriate information:
   (note: assume most common isotope unless otherwise specified)

<table>
<thead>
<tr>
<th>Species</th>
<th>H⁺</th>
<th>B</th>
<th>¹³C</th>
<th>O²⁻</th>
<th>F⁻</th>
<th>³⁵Cl⁻</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td># protons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># electrons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># neutrons</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atomic mass</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

2. Indicate the atom within each set which is the most electronegative:
   - Cl or F
   - Si or C
   - B or C
   - C or H
   - C or N

3. How many valence electrons do the following atoms have?
   - a. Nitrogen
   - b. Sulphur
   - c. Silicon
   - d. Fluorine
   - e. Oxygen
4. Which bond is more polar?
   a. H—CH₃ or Cl—CH₃  
   b. H—Cl or H—F  
   c. Cl—Cl or H—F  
   d. H—OH or H—H

5. Draw the Lewis structures for the following molecules:
   a. NH₃  
   b. CH₃NH₂  
   c. C₂H₅NO₂.  
   d. CO₂  
   e. CH₄  
   f. H₂CO₃