1. An element has an atomic number of 19.
   a) In which group is this element? [1]
   b) In what period is this element? [1]
   c) Identify the element by name. [1]
   d) What is this element’s mass number? [2]
   e) Is this element a metal or a non-metal? Explain your answer. [5]

2. Which of the following pairs of elements would have stronger ability to gain electrons? Explain clearly why?
   a) Na or F [3]
   b) Li or Cl [3]
   c) O or Mg [3]
   d) H or O [3]
   e) Ca or Ar [3]

3. Thabiso has the following substances in the Science Laboratory. For each one of them say whether it is an element or a compound, give reasons.
   a) NaCl [2]
   b) SO₂ [2]
   c) H₂ [2]
   d) Cl₂ [2]
e) CO₂

4. Give three trends of the Periodic table and explain what each one of them means. [6]

5. Draw an atomic structure of Phosphorus, show how the electrons are filled in the shells. [4]

6. Draw and complete following table appropriately: [10]

<table>
<thead>
<tr>
<th></th>
<th>Solid</th>
<th>Liquid</th>
<th>Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forces between particles</td>
<td>Strong</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motion</td>
<td></td>
<td>random motion throughout</td>
<td></td>
</tr>
<tr>
<td>Fixed/stable Shape</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed volume</td>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Distance between particles</td>
<td>small</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>