Use your notes from pages 27 – 30 and the terms in the vocabulary box to fill in the blanks for the following ten questions. You can use each term as many times as necessary. You will not need to use all the terms.

1) In a tube filled with water, the pressure is ____________________________ at the top and ____________________________ at the bottom.

2) In a tube filled with air, the pressure is ____________________________ at the top and ____________________________ at the bottom.

3) For water, air and all other fluids, pressure ____________________________ with depth.

4) The pressure of air at sea level is called ____________________________.

5) With each 10 m that you go deeper in water than sea level, the pressure goes up by ________________.

6) The tendency for objects to rise or float in a fluid is called ____________________________.

7) Buoyancy occurs because of differences in ____________________________ of the object and the fluid.

8) Objects rise or float in a fluid because the fluid exerts a ____________________________ force on them.

9) If the ____________________________ force is greater than the force of ____________________________ the object will rise.

10) If the buoyant force is equal to the force of ____________________________ the object will ________________.

11) Match the Term on the left with the best Descriptor on the right. Each Descriptor may be used only once.

<table>
<thead>
<tr>
<th>Term</th>
<th>Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buoyancy</td>
<td>A. Upward force exerted by a fluid</td>
</tr>
<tr>
<td>Convection</td>
<td>B. Downward force exerted by a fluid</td>
</tr>
<tr>
<td>Buoyant force</td>
<td>C. Ability or tendency to rise or sink in a fluid</td>
</tr>
<tr>
<td>Gravitational force</td>
<td>D. Heat transfer through the flow of a fluid</td>
</tr>
</tbody>
</table>
12) Why is the fluid from the bottom hole forced out farther than the fluid from the top hole?

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13) Is the air pressure greater at the base of a mountain or the top of the mountain? Explain.

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Use the following diagram to answer questions 14 and 15

14) There is 1 atm of pressure exerted on the diver at sea level. How much pressure is exerted on the diver at a depth of 10 m?

15) How much pressure is exerted on the diver at a depth of 25 m?

16) When an object is placed in a fluid, it may sink, rise or remain in place. What will happen with each of the following objects? Circle the appropriate arrow.

(a) Ring  (b) Healthy fish  (c) Cork  (d) Rock  (e) Helium-filled balloon  (f) Person

17) Would it be correct to circle more than one arrow for (b) and (f)? Why?
18) Compare the force arrows for the following objects. The larger the arrow, the more it represents. State whether the object is sinking, rising or floating.