Use your notes from pages 23 – 26 and the terms in the vocabulary box to fill in the blanks for the following twelve questions.

1) A(n) ______________________________ is any substance that flows.

2) The thinness or thickness of a fluid is a property of fluids called ______________________________.

3) Water is ______________________________ than honey.

4) Molasses is ______________________________ than vegetable oil.

5) A thick fluid has a ______________________________ viscosity than a thin fluid.

6) A thicker fluid is more resistant to flow. Therefore, it flows more ______________________________ than a thinner fluid.

7) To compare the viscosity of fluids, you can measure their ______________________________ which is the speed at which fluid flows from one point to another.

8) Heating a liquid ______________________________ its viscosity.

9) Heating a gas ______________________________ its viscosity.

10) The property of fluids that make the particles hold together because they are attracted to each other is called ______________________________.

11) The water particles at the surface attract each other in a way that makes the surface act like a skin. This effect is called ______________________________.

12) The attraction between particles of a fluid and another substance so that the fluid clings to it is called ______________________________.
13) Data has been collected from an experiment investigating how temperature affects the viscosity of three substances.

Use the data in the graph above to answer the questions below.

(a) Which substance is a solid at room temperature (about 20°C)?

(b) At what temperature is the viscosity of substance A and substance B equal?

(c) When the temperature is 20°C, which substance has the greatest flow rate?

(d) When the temperature is 10°C, which substance has the smallest flow rate?

(e) When the temperature is 50°C, which substance has the greatest flow rate?

(f) Suppose that substance A was at 65°C. Predict how fast substance A would flow.

(g) Predict at what temperature substance A would become a solid.

(h) How many seconds would it take fluid B to travel 100 cm at 40°C?

(i) How far could fluid C travel in 10 seconds at 60°C?
14) 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>Cohesion</td>
<td>A. Resistance to flow</td>
</tr>
<tr>
<td>Adhesion</td>
<td>B. The speed at which a fluid flows from one point to another</td>
</tr>
<tr>
<td>Viscosity</td>
<td>C. Attraction or joining of two different objects or fluids to each other</td>
</tr>
<tr>
<td>Flow rate</td>
<td>D. Strength with which the particles of an object or fluid attract each other</td>
</tr>
<tr>
<td>Surface tension</td>
<td>E. Property of a liquid in which the surface of the liquid acts like a thin skin</td>
</tr>
</tbody>
</table>

15) How is flow rate related to viscosity?

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________________________________________________________________________
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16) What is the effect of temperature on viscosity in liquids?

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________________________________________________________________________

17) What is the effect of temperature on viscosity in gases?

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18) What is the difference between adhesion and cohesion?

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19) Why do fluids adhere to certain surfaces?

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