

___ / 20 = %

Atmospheric layers (10 marks)

1. Identify the atmospheric layer that corresponds to the description. (2)
 - a. The layer that has the highest atmospheric pressure. _____
 - b. The ISS (International Space Station) is kept here, so that it remains in orbit around the earth. _____

2. Which two layers of the atmosphere exhibit a significant warming? For each layer, explain why it heats up. (4)

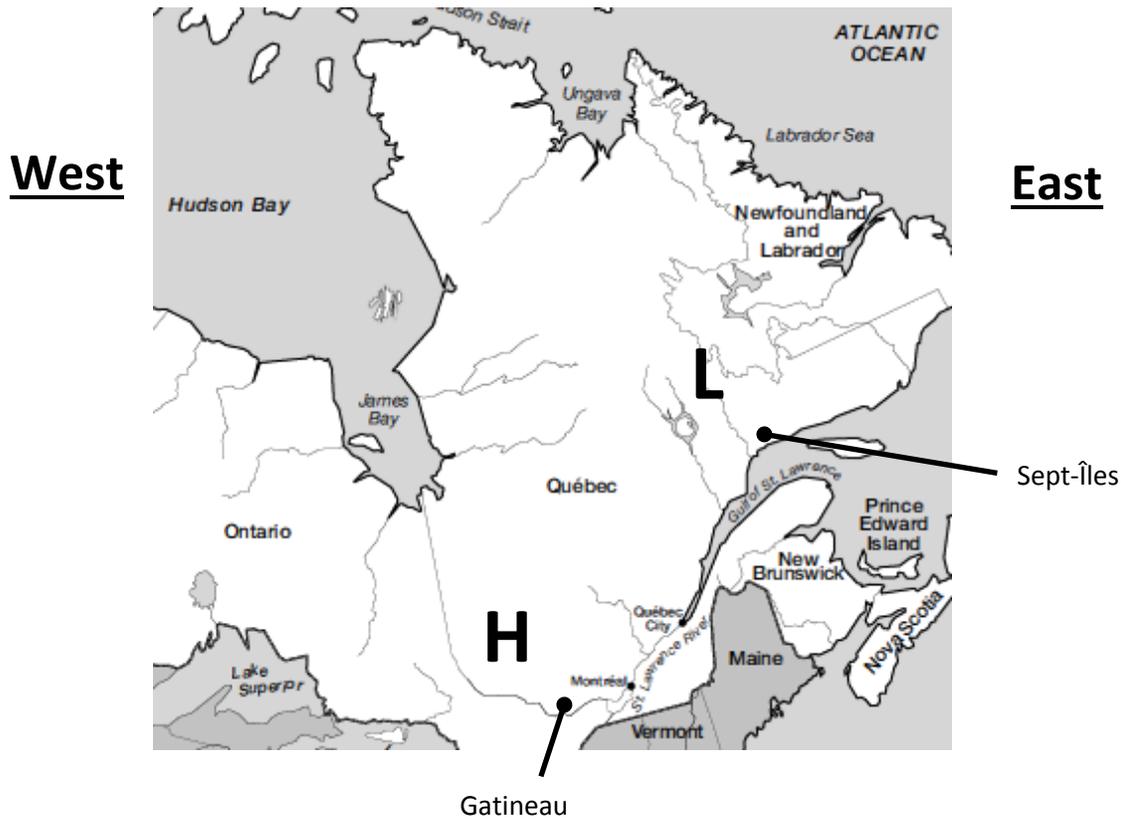
_____ because _____

_____ because _____

Atmospheric pressure

3. As you climb to the top on a very high mountain you notice that you need to slow down and breathe deeply. Explain why the air is “thinner” here even though it is significantly cooler (which usually would make air more dense). (2)

4. The air in a hot air balloon is heated and causes the balloon to rise. Explain this phenomenon at the molecular level. (2)



Currently there is an anticyclone hovering overhead near Gatineau as part of a **warm air mass** that is heading towards Sept-Îles. (10 marks)

1. Describe the current weather in Gatineau. (1) _____
2. Describe the current weather in Sept-Îles. (1) _____
3. **Draw the line represent the front between the high and low pressure systems onto the map using the appropriate symbols and colour. (2)**
4. Describe the weather at the front. (1) _____
5. What types of clouds have formed at the front? (1) _____
6. In this case, in what direction is the wind generally blowing in **Sept-Îles**? (2)
 Circle one pair: Northeast → Southwest or Southwest → Northeast
 Why? _____
7. In this case, in what direction is the wind generally blowing in **Gatineau**? (2)
 Circle one pair: Northeast → Southwest or Southwest → Northeast
 Why? _____