**ESS 431 PRINCIPLES OF GLACIOLOGY**

**ESS 505 THE CRYOSPHERE**

**Lecture 08 – Ice Dynamics II: Sliding of Glaciers**

*Due Monday, October 21 2019, at start of class*

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| Drewry pp. 10–14, 20–32. |

1. Can a glacier slide if its temperature is below the freezing point of water?
2. In the Weertman theory, what are the two processes that allow ice to “slide” past small and large bedrock bumps respectively?
3. How does high subglacial water pressure influence glacier flow?
4. What is “effective pressure”?
5. How is a spreading ice shelf conceptually like a fast-sliding glacier?
6. How can a lake form under a glacier?
7. Sketch a Röthlisberger channel, and label the different forces acting to keep the channel in balance.