**Chapter 4 Questions for FYS 178 Fall 2020**

In early 1906, a group of Norwegian professors was attempting to establish a personal professorship for Vilhelm at what university in Christiania?

In their published letter to argue for awarding a personal professorship to Vilhelm, the Academic Council argued that bringing him to Norway would “promise a rich dividend for \_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_.” Fill in the blanks.

Vilhelm was almost helpless in his research when his top assistant left in 1908 to pursue a full-time job with the Swedish Hydrographic-Biologic Commission. Name the assistant.

With the loss of Devik in 1911, Vilhelm feared for the health of his research program after re-locating to Norway. Name a concern of the conditions in Norway that stoked Vilhelm’s fears.

By 1911, Vilhelm found that the conditions in Norway had lead to three unacceptable conditions related to his research program. Name two of the three conditions that pushed Vilhelm to accept the position as head of a new geophysics institute in Leipzig.

Whose report to the Ministry of Culture in Germany asserted that aeronautical progress was as dependent upon dynamic meteorology as on technological improvement of aircraft structure?

In the proposal to appoint Vilhelm as the head of the new Leipzig geophysics institute, it was argued that Vilhelm’s methods of analysis would have what impact on a Zeppelin airship voyage?

When Vilhelm contemplated accepting the position in Leipzig and leaving Norway, he wrote “at home [in Norway] I work in a \_\_\_\_\_\_\_\_, but here [in Leipzig] I would get \_\_\_\_\_\_\_\_.” Fill in the blanks.

What was Vilhelm’s wife’s opinion about the possible move from Norway to Leipzig?

Name the two specific goals of the Leipzig offer extended to Vilhelm.

Vilhelm described the advantages of accepting the Leipzig offer over staying in Norway to his long-time friend Arrhenius. Name two of the advantages listed by Vilhelm.

Describe what Vilhelm meant in his inaugural Leipzig lecture that “It is for us to discover a method of practically utilizing the knowledge contained in the equations.” when he talked about applying the equations of exact physics to the field of aerology.

Vilhelm’s Leipzig research group first produced what based on the observations for each day of the international aerological ascents?

What was the usefulness of studying atmospheric diagnoses from day to day in helping invent weather forecasting tools?

Vilhelm was a guest of honor at what event in June 1913?

Of the various atmospheric forces that needed to be taken into account for making a weather forecast, one force in particular was the most problematic for Vilhelm’s Leipzig research group. Name the problematic atmospheric force.

Name two atmospheric forces that were more easily understood by Vilhelm’s Leipzig research group.

Who replaced Vilhelm’s assistant Hesselberg in 1916?

What is a “line of convergence” on a weather map?

In *Kinematics* (1911), the connection between lines of convergence and a weather phenomenon that had become quite important to aviation was suggested. Name the weather phenomenon.

What event in September 1913 over the North Sea raised the awareness of the importance of understanding the weather in aviation?

Who was the first doctoral student at the new Leipzig geophysical institute and what was his project under Vilhelm?