**Chapter 9 Questions for FYS 178 Fall 2020**

What was never part of Vilhelm’s strategy for achieving professional success?

Bjerknes visited what two cities in the fall of 1919 for the purposes of presenting the nascent Bergen meteorology and of learning greater details about what measures would be necessary for a comprehensive weather service for aviation?

The rationale for constituting the polar front and the claims made for this concept arose from Vilhelm’s desire to do what?

What was the preliminary response from the elder Swedish meteorologists to the Bergen forecasting methods in 1918?

List one problem in Norway in 1918, 1919 that Vilhelm had to contend with in trying to attract highly qualified university graduates to assist with his summer forecasting service.

What happened in Norway in 1921 that allowed Vilhelm to attract Norwegian students in the forecasting service?

Whose representatives were not invited to the International Meteorological Committee’s first full-scale meeting since the war?

After gaining much influence at the International Meteorological Committee’s first full-scale meeting since the war, Vilhelm declared in a letter to his wife, “I am the new \_\_\_\_\_\_\_\_!” Fill in the blank.

One of Vilhelm’s first acts as the new head of the Commission for the Exploration of the Upper Atmosphere in 1919 was to seek and have approved the \_\_\_\_\_\_\_\_ as the unit of atmospheric pressure. Fill in the blank.

What two items would have to be addressed in Norway in order to attract individuals having the necessary scientific competence to the weather service?

Two issues prominent in the fall of 1919 had proven crucial for the polar front’s emergence. List one of the issues.

Of airships or airplanes in 1919, which was more vulnerable to sudden wind shifts, temperature and pressure changes, icing conditions, and severe weather?

From the start in Bergen, Vilhelm’s vision of a transformed system of forecasting entailed two types of interdependent innovations. What were they?

Norwegian ship companies stood to gain an advantage by having a weather service that extended outward into the ocean. What did they stand to save (other than money) by having good weather forecasts?

What was a benefit to added observation periods in terms of weather research?

Solberg had discovered that a mature cyclone can “give birth” to what?

The Bergen meteorologists extended what World War I image to hemispheric dimensions in 1919?

The steering and squall surfaces were renamed \_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_, respectively. Fill in the blanks.

What casts doubt on the suggestion that Solberg “discovered” the polar front on reanalyzed old weather charts covering the north Atlantic Ocean and much of the North American continent (e.g. Figure 20)?

Did Jacob Bjerknes manage to convince meteorologists of the existence of the polar front during conferences in Bergen and Leipzig in 1920?

The convenience of having a single atmospheric discontinuity, hemispheric in scope, could aid in what type of forecast (short-term or long-term) required by aviation if it were to regularly embark on cross-oceanic routes?

Vilhelm foresaw returning to what problem by attempting to reproduce and predict the motions of the polar front mathematically?

What were Vilhelm’s three primary roles for the Bergen school in 1920?

All initial references to the polar front are linked to discussions of what?

What was Vilhelm’s proposal with regards to who should train analysts of the future circumpolar weather service?

What difficult-to-forecast weather phenomenon and aviation hazard was shown by the Bergen school to exist at the stationary line of the polar front (see Figure 21)?

The original description of the polar front reinforces what assertion about the Bergen meteorologists?

What new catchall phrase was adopted by the Bergen school to emphasize that they were offering a new approach?

As Vilhelm and his assistants began to advance their ideas on the polar front and on a circumpolar weather service to countries around the world, Vilhelm referred to his assistants as \_\_\_\_\_\_\_\_. Fill in the blank.

Which of Vilhelm’s “comrades-in-arms” tended to be more passive and believed that the truth would win out in the end?

How did prejudice potentially play a role in the Bergen school’s polar front theory as not gaining widespread acceptance?

What political and economic realities may have played a role in the leaders of Austrian meteorology’s troublesome opposition to the Bergen schools methods?

What weather phenomenon observed in 1919 and 1920 proved difficult to incorporate into the Bergen school’s original polar front theory?

To protect the financial foundation of the Bergen school against the major Norwegian economic depression of late 1920, Vilhelm further integrated weather into the economic sphere of which industry?