**Chapter 5 Questions for FYS 178 Fall 2020**

World War I provoked changes to three components of weather forecasting. Name two of the three.

Huge profits from what industry during the early war years allowed the Bergen Museum to initiate the plan for a long-awaited university in West Norway?

Name the original two sciences represented at the geophysics institute founded by the Bergen Museum.

As diplomatic relations between Germany and Norway worsened, what was finally no longer permitted after 1917?

What was the impact of World War I on Vilhelm’s students and assistants at the Leipzig institute?

When Vilhelm reluctantly accepted the Bergen Museum call and resigned his position in Leipzig, who was appointed a professorship in Leipzig to keep the institute on the path Vilhelm had set it on?

What two pitfalls did Vilhelm need to avoid in Norway to attain his goal of transforming meteorology as a science and a profession?

What was one solution enacted by Vilhelm to avoid these pitfalls?

When Vilhelm and his assistants had used hydrodynamic equations on an analysis of a wind and pressure reading tried making a three hour forecast, did the experiment succeed or fail? If they failed what was the reason for their failure?

Vilhelm discovered that the minister of defense for Norway was vacationing in a neighboring cabin in the mountains near Gjeilo. Name the minister of defense who requested that Vilhelm write a report on the German field weather service and the feasibility of a comparable service for Norway.

What was Vilhelm’s view on World War I; did he sympathize with the Central powers, with the Allied powers, or did he remain neutral?

What two factors created a demand for increased knowledge of the atmosphere and for improved means of weather prediction during World War I?

What evidence in military organization in place toward the end of the war symbolized the importance of meteorology in the modern military?

What types of attacks in 1915 during World War I convinced both the French and the British of the relevance of meteorology to military operations?

Why did the Zeppelin airships bomb the towns on the English east coast in 1915? Did these locations hold strategic military value?

Why were weather forecasts during wartime more challenging than weather forecasts made during peacetime?

What did wartime weather forecasting experiences reveal about using formalistic empirical rules rather than depending on knowledge of the dynamics and physics of the atmosphere, according to Shaw?

What were three Norwegian resources desired by the Allied and Central powers during World War I?

The rapid development of the Norwegian air defense force was in response to what German tactic that threatened Norway’s merchant fleet?

Based on Vilhelm’s report describing the prewar German weather observation network, how were observations exchanged rapidly between stations?

In Vilhelm’s report describing the prewar German weather observation network, he mentioned how their field weather services proved valuable for planning in five specific types of operations. Name two of the five.

In Vilhelm’s proposal for a Norwegian weather service, he considered both short-term requirements and long-term prospects. What was his focus in considering his long-term prospects?

Vilhelm noted in 1917 that “We are living in an age in which new demands on meteorology are going to be made on a grand scale,…above all through the \_\_\_\_\_\_\_\_.” Fill in the blank.

Government calculations during fall 1917 revealed that Norway’s reserve supply of what resource would be exhausted in much less than a year?

In a letter to Holtfodt in 1918, Vilhelm noted that “Under these conditions \_\_\_\_\_\_\_\_ has the unconditional demand for all the support it can receive from meteorology’s side.” Fill in the blank.

In a newpaper article (*Tidens Tegn*), the director of the Norwegian Meteorological Institute (Hesselberg) downplayed the possibility of a telephone-based weather service for Norwegian farmers due to a blackout that had made forecasting in Norway more difficult than usual. What was the blackout?

Initial plans for post-war commercial aviation in Norway called upon the industry to do two things. List the two items.

What was one of the necessities listed by Vilhelm for a commercial aviation weather service?

What factors led to astronomical prices for basic commodities and to social unrest in Norway, particularly after 1916?

The year 1917 witnessed a growing wave of enthusiasm for what in Norway?

What was the goal of Norway’s Central Committee for Scientific Cooperation for the Promotion of Industry?