**Chapter 10 Questions for FYS 178 Fall 2020**

Was the storm warning system implemented along coastal Norway in 1909 an absolute success, a marginal success, or a dismal failure?

What had Norway become by 1919 for the first time in her modern history?

What happened in the summer of 1920 that seemed to cause Norway’s economy to fall apart?

What upgrade did the Norwegian fishing fleet make in the postwar era that made them more vulnerable to storms out in the open sea?

Why did the upgrade made by the Norwegian fishing fleet in the postwar era make them more vulnerable to an economic depression?

What happened to cause the market for Norwegian fish to contract (shrink)?

How could precision daily weather forecasting help the Norwegian fishermen of the 1920s to squeeze the most from their precarious business?

What emergency measures did the Norwegian government take in 1920 and 1921 to aid fishermen?

Given the emergency measures implemented by the Norwegian government in 1920 and 1921, how could effective weather forecasting save the state considerable expense?

The fishermen at what location decided to pay for the cost of receiving daily weather forecast telegrams during the winter of 1919, 1920?

Vilhelm and Hesselberg submitted expanded budgets to the Norwegian government in the fall of 1919 based on supporting the projected needs of what industry?

What event happened on January 14, 1920 that saved the budget proposals submitted by Vilhelm and Hesselberg to the Norwegian government?

Emergency funds were rapidly provided in 1920 for setting up a weather station equipped with a wireless telegraph on what remote polar island, located in the “blind spot” along the path frequented by severe winter storms?

With regards to the fishing industry, being able to use the periods of \_\_\_\_\_\_\_\_ emerged as important as avoiding dangerous weather. Fill in the blank.

Aside from the challenges of producing precise and accurate weather forecasts in support of the fishing industry, another challenge was the continued need to rely on what method to spread forecasts to the many Norwegian fishing stations?

What three atmospheric models or concepts became established as fundamental principles in the Bergen meteorology by 1922?

What process had Bergeron hypothesized to explain the disappearance of the warm sector noted in several storms in late 1919?

What process appeared to be connected with the birth of new cyclones and also seemed to imply the death of old cyclones by the cutting off of the supply of warm air?

What weather feature studied by Bergeron had all the characteristics of a warm front except that miles behind its base, at ground level, a discontinuity could be delineated with little rain associated with it?

“This process of \_\_\_\_\_\_\_\_ and the phenomena accompanying it are exceedingly important from the point of view of the forecasts, and will therefore be made the subject of detailed treatment in later papers issuing from the Norwegian Weather Service.” Fill in the blank.

Bergeron was able to show convincingly in the forecasting work that two types of *sammerlapping* processes occur (Figure 22). Note the differences between the two types of processes.

The occluded front, and the occlusion process in general, provided the key for arriving at a model for what?

The schematic horizontal view in Figure 23 shows the development and dissipation of a cyclone at what vertical level?

What atmospheric force acts to “kill” the mid-latitude cyclone?

Conversion between what two types of energy is critical during the development and dissipation of a cyclone?

Does a young or an old cyclone tend to move faster?

What routine enabled the Bergen meteorologists to introduce a greater stability to the map analyses?

The Bergen meteorologists claimed that the time interval between the arrival of one cyclone family (Figure 24) and the next is roughly how many days?

In their model of the general circulation of the Northern Hemisphere, the Bergen group proposed how many air currents moving south from the polar regions?

What two concepts became the capstones of the early Bergen school’s endeavors?

What type of thinking and conceptualizing that occurred only after 1918 was necessary before the evolutionary cyclone model could be constructed?

What improvements with regards to cloud and weather observations and to the frequency of weather observations were necessary to make it possible to observe the occluding process?

What drove the Bergen school’s striving for greater precision in their daily weather forecasts?

rationalize weather – account for every occurrence of weather phenomena