

CVG 2171

ASSIGNMENT # 7

PROBLEM # 1:

- a) Find the exact time of observing Polaris at Upper Culmination on November 2 at point P, latitude 47° N and longitude 73.5° W.
- b) Find the bearing and the time of observing Polaris at the next West Elongation on the same date and at the same point.

PROBLEM # 2:

- i) A radio tower situated on level ground casts a shadow of 80 m when the sun's altitude is $40^{\circ}22'$. What is the height of the radio tower?
- ii) The time of upper culmination of Polaris at point A, longitude $93^{\circ} 45'W$ is 20^h23^m , what is the time of upper culmination at point B, longitude $87^{\circ}55'W$ on the same date?
- iii) What is the date and standard time in Paris, longitude $02^{\circ}15' 15''$ E of Greenwich, when it is in Ottawa, longitude $73^{\circ}53'30''$ W of Greenwich, 23^h45^m of April 30, 2016?
- iv) What is the approximate date of the vernal equinox? What is the declination of the sun on that day? Vernal Equinox signifies the beginning of what season in the Northern hemisphere?