1ª Lista de exercícios – ACA 0115 – Introdução às Ciências Atmosféricas

Prof. Fábio L. T. Gonçalves

1 – O que é meteorologia?

2 – Explique a diferença entre:

a) tempo e clima

b) meteorologia e geografia

3 – O que você entende por:

a) atmosfera

b) inversão térmica

c) frente fria

d) temperatura

e) umidade relativa

f) camada de ozônio

g) efeito estufa

4 – Faça um esquema mostrando as mudanças físicas de estado da água.

5 – Leia o texto anexo e responda:

Focus on A SPECIAL TOPIC

Is December 21 Really the First Day of Winter?

On December 21 (or 22, depending on the year) after nearly a month of cold weather, and perhaps a snowstorm or two, someone on the radio or TV has the audacity to proclaim that "today is the first official day of winter." If during the last several weeks it was not winter, then what season was it?

Actually December 21 marks the *astronomical* first day of winter in the Northern Hemisphere (NH), just as June 21 marks the *astronomical* first day of summer (NH). The earth is tilted on its axis by 23½° as it revolves around the sun. This fact causes the sun (as we view it from earth) to move in the sky from a point where it is directly above 23½° South latitude on December 21, to a point where it is directly above 23½° North latitude on June 21. The astronomical first day of spring (NH) occurs around March 20 as the sun crosses the equator moving northward and, likewise, the astronomical first day of autumn (NH) occurs around September 22 as the sun crosses the equator moving southward.

In the middle latitudes, summer is defined as the warmest season and winter the coldest season. If the year is divided into four seasons with each season consisting of three months, then the meteorological definition of summer over much of the Northern Hemisphere would be the three warmest months of June, July, and August. Winter would be the three coldest months of December, January, and February. Autumn would be September, October, and November—the transition between summer and winter. And spring would be March, April, and May—the transition between winter and summer.

So, the next time you hear someone remark on December 21 that "winter officially begins today," remember that this is the astronomical definition of the first day of winter. According to the meteorological definition, winter has been around for several weeks.

a) De que forma a inclinação do eixo da Terra afeta as estações do ano?

b) Qual a diferença das definições astronômica e meteorológica das estações do ano?