# Unit 1: General Review and Global Circulation Concepts

## Questions for Review

* Explain why geostrophic balance is not a good approximation for motion at the equator.
* Explain why the hydrostatic approximation is not applicable for convective systems.
* Describe how the continuity principle relates divergence/convergence to pressure, vertical motion, and expected weather.
* Compare the typical balance of forces for horizontal motion in the tropics to the force balance in the midlatitudes.
* You were introduced to various methods of defining the tropics, please discuss at least three methods and give their approximate latitudinal boundaries.
* List three tropical air masses, their characteristics, and regions where each type of air masses originates.
* Compare and contrast the northern and southern hemispheric pressure and wind systems in the tropics and subtropics.
* List at least three differences between atmospheric motion in the tropics and the midlatitudes.
* Describe the ITCZ and its role of the general circulation
* Describe the trade wind inversion and its impact on east-west cloud distribution over the tropical oceans.
* Describe the typical pattern of precipitation over the tropical oceans including the role of surface winds and ocean currents
* Where in the tropics is most of the precipitation during June to August, March to May, September to November, and December to January?