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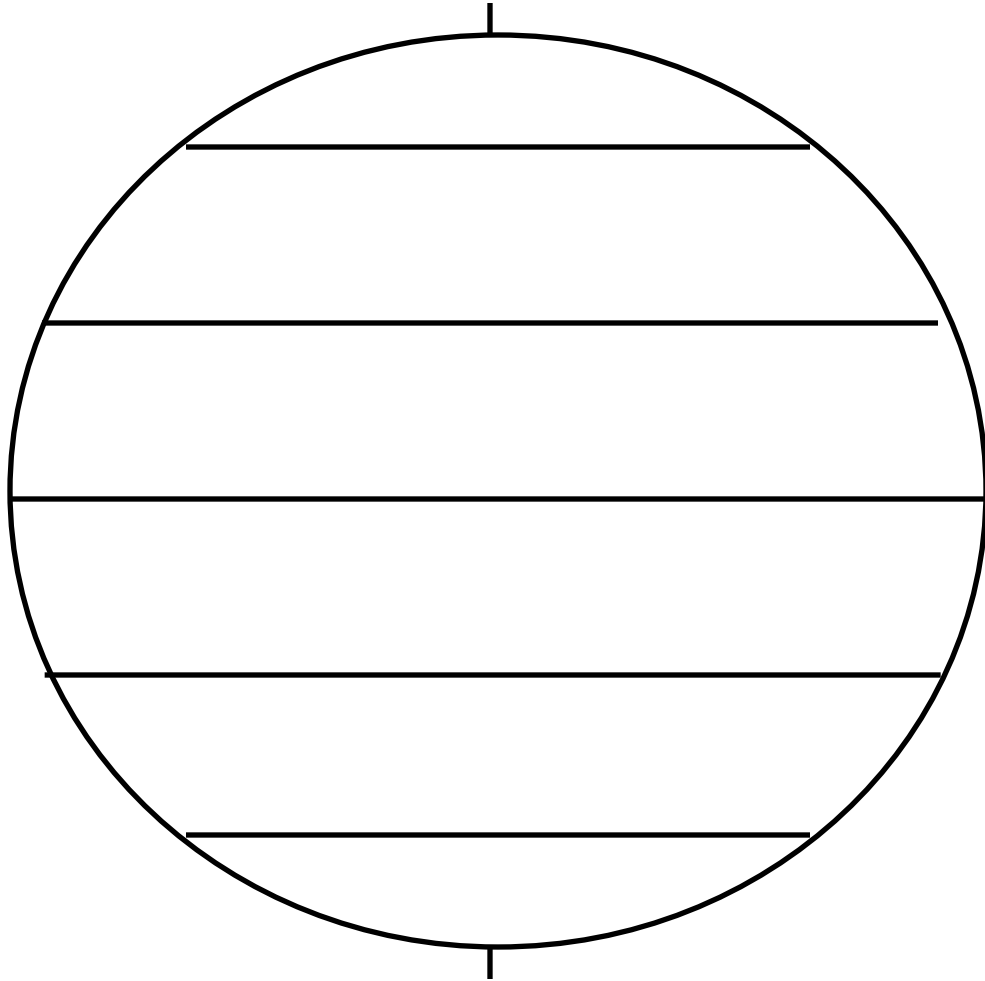
## METEOROLOGY 101, HOMEWORK #5

### GLOBAL WINDS, PRESSURE AND CIRCULATION

The area inside the circle on the opposite page represents the Earth's surface. The region outside the circle represents a cross-sectional view of the lower atmosphere. Show the global wind and surface pressure systems, and the general circulation of the lower atmosphere. The Earth is rotating, so the Coriolis effect must be taken into account. To make things easier, assume a uniform surface (assume it's all water, for example). Follow the directions exactly. There's a figure in the text that should help a lot.

- 1) Along the axis of the Earth, draw and label each of the High and Low pressure systems.
- 2) Inside the circle draw in the idealized global pattern of surface winds, using arrows to show both the direction and the deflection (caused by the Coriolis effect) of the winds. Label the name of each wind in the correct latitude zone.
- 3) To the right of the circle, label each of the fronts, latitudes and zones at  $0^{\circ}$ ,  $30^{\circ}\text{N/S}$  and  $60^{\circ}\text{N/S}$ .
- 4) Just outside the circle on the left side, draw a cross-sectional view of the three cell model of the general circulation of the atmosphere. Use a series of short arrows that will show where the air is rising and descending, and the direction of the wind flow aloft and at the surface. Do this on the left side of the diagram from the North Pole to the South Pole. Label the name of each cell.

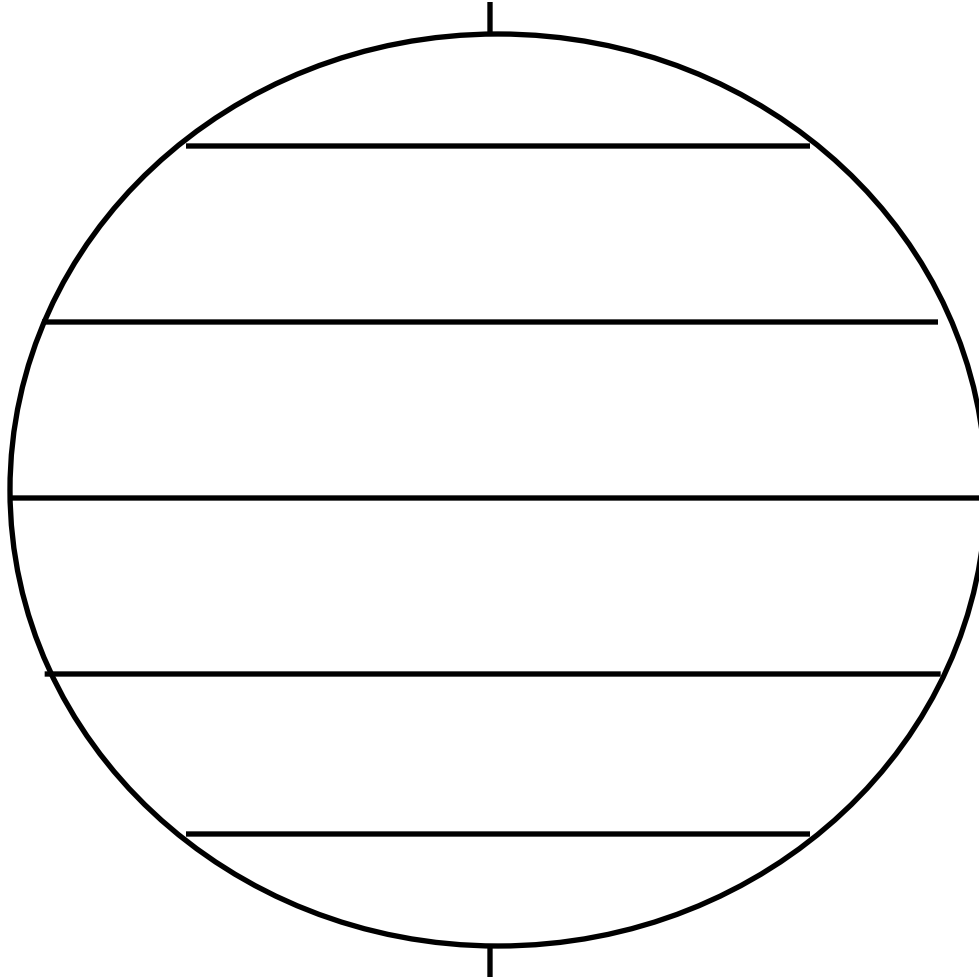
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