Question title: Mass and Volume

Conservation of Mass and Conservation of Volume differ substantially when a fluid is:

1. compressible (density changes a lot).
2. adiabatic (conserves energy).
3. isenstropic (conserves entropy).
4. granular.
5. viscous.

Question title: Budgets

A budget is an accounting of what goes in and what goes out. The difference leads to a change in the content of whatever is doing the going in and out.

True False

Question title: Evaporation Precipitation

Evaporation, precipitation and runoff affect only the total water content ("freshwater") and not the salt.

True False

Question title: What to Conserve

Emery et al. chp 5 discusses primarily conservation of

1. Heat Energy
2. Freshwater
3. Oxygen
4. Biomass
5. Entropy

Question title: Material Lagrangian

The Lagrangian, or Material, approach budgets for changes to a specified moving quantity of material.

True False

Question title: Eulerian

The Eulerian, or Control Volume, approach budgets for changes to a specified moving quantity of material.

True False

Question title: Conservation by Eulerian and Lagrangian methods

Eulerian (control volume) and Lagrangian (control mass) methods are equally valid, but differ in their application, equations, and interpretation.

True False

Question title: The Equation of State

The equation of state is the same for air and water.

True False

Question title: Nondimensional Equations

Every equation of physical importance should be independent of the scientist's choice of units.

True False