

Module 10: Short questions

1. How does mass transfer differ from bulk flow? Can mass transfer occur in a homogeneous medium?
2. Give examples for (a) liquid-to-gas (b) solid-to-liquid, (c) solid-to-gas, and (d) gas-to-liquid mass transfer.
3. What is the driving force for (a) heat transfer (b) electric current (c) fluid flow and (d) mass transfer?
4. What is an impermeable surface in mass transfer? How is it expressed mathematically? To what does it correspond in heat transfer?
5. What is concentration boundary layer? How is it defined for flow over flat plate?
6. What is the physical significance of the Schmidt number? What is the heat transfer equivalent of this number? What does $Sc = 1$ signify?
7. What is the physical significance of the Lewis number? What is the heat transfer equivalent of this number? What does $Sc = 1$ signify?
8. What is the physical significance of the Sherwood number? What is the heat transfer equivalent of this number? What does $Sh = 1$ signify for a plain fluid layer?