

Quiz 5: Distillation

1. The distillation column's energy consumption _____ with the reflux ratio
 - ☒ (A) increases
 - ☐ (B) decreases
 - ☐ (C) does not change

2. Consider the final T1 specifications and design specs from the last class. For a **methanol purity** of 98 %, the new values of D/F and RR are:
 - ☒ (A) [0.87-0.91] and [0.19-0.23]
 - ☐ (B) [0.85-0.89] and [0.62-0.66]
 - ☐ (C) [0.76-0.80] and [0.18-0.22]
 - ☐ (D) None of the options

3. Consider the final T1 specifications and design specs from the last class. Do a sensitivity analysis on the effect of the n° of stages on T1 energy consumption.
 - ☐ (A) The energy consumption increases with the n° stages
 - ☒ (B) The energy consumption decreases with the n° stages
 - ☐ (C) There is no effect on the energy consumption

4. Stage 1 of the RadFrac block is the condenser.
 - ☒ (T) True
 - ☐ (F) False

5. Consider the final T1 specifications and design specs from the last class. For a **methanol recovery of 92%**, the energy consumption in the reboiler is:
 - ☒ (A) between 1700 and 1750 kW
 - ☐ (B) between -1650 and -1600 kW
 - ☐ (C) between -1700 and -1650 kW
 - ☐ (D) between 1750 and 1800 kW
 - ☐ (E) None of the options