Name: _____   ID: _____

Analytical Chemistry II – Quiz (28th May, 2020)

1) What is meant by temperature programming in GC? Why is it frequently used?

Temperature programming involves increasing the temperature of a GC column as a function of time. This technique is particularly useful for samples that contain constituents whose boiling points differ significantly. Low boiling point constituents are separated initially at temperatures that provide good resolution. As the separation proceeds, the column temperature is increased so that the higher boiling constituents come off the column with good resolution and at reasonable lengths of time.

2) What properties should the stationary-phase liquid for GC possess?

Desirable properties of a stationary phase for GC include: low volatility, thermal stability, chemical inertness, and solvent characteristics that provide suitable k and α values for the analytes to be separated.

Another acceptable answer (based on the handout):
ability to "dissolve" analytes, chemical neutrality, low volatility and thermal stability, high selectivity against analytes.