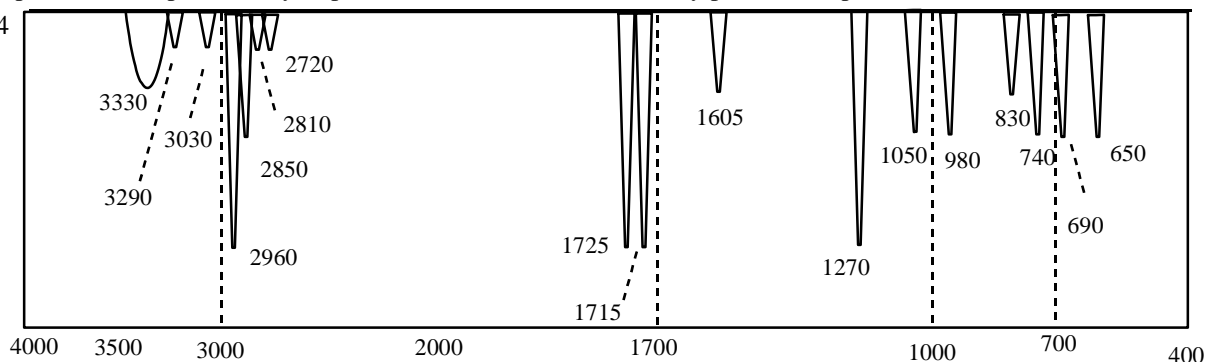


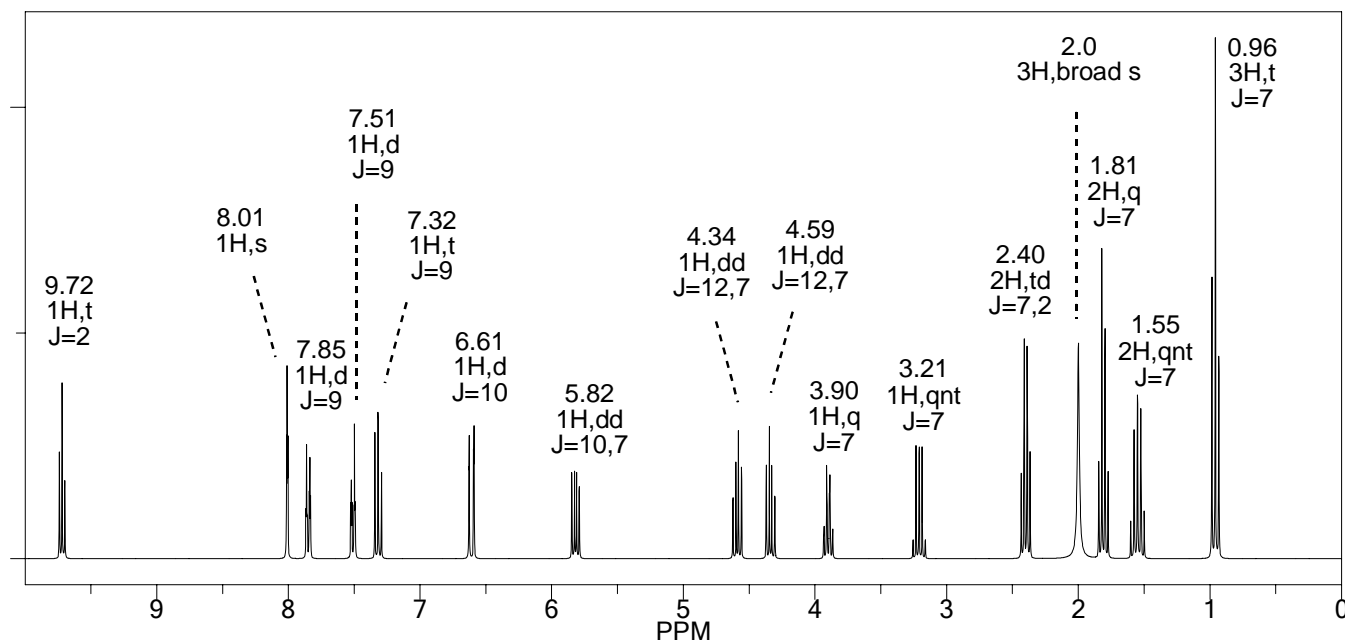
Problem 75 - Predict a reasonable structure from the spectral information provided below. As much as possible match the spectral information to the part of the structure that it explains. Show all of your work.

MW and IR Spectrum: Interpret as fully as possible from structure. Not every peak is interpretable. (units = cm^{-1})

MW = 305.4

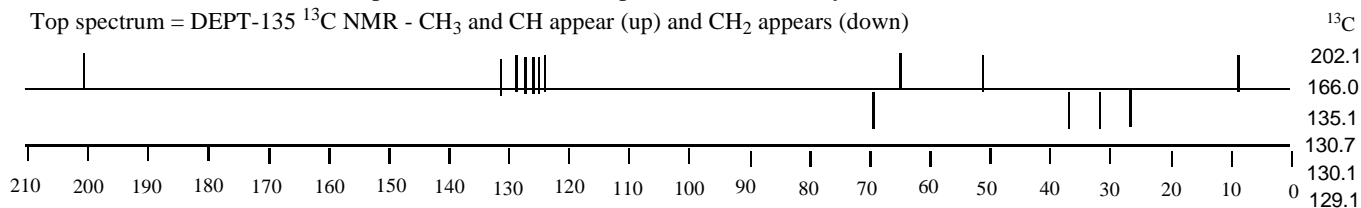


Proton NMR: interpret data (calculate chemical shifts to confirm they match actual values, $N = \#$ neighbors)

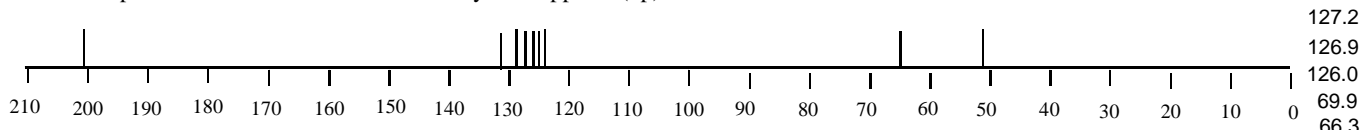


^{13}C and DEPT NMR: As much as possible match the ^{13}C peaks to carbons in your structure.

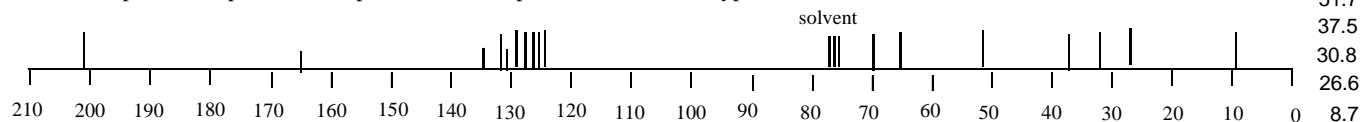
Top spectrum = DEPT-135 ^{13}C NMR - CH_3 and CH appear (up) and CH_2 appears (down)



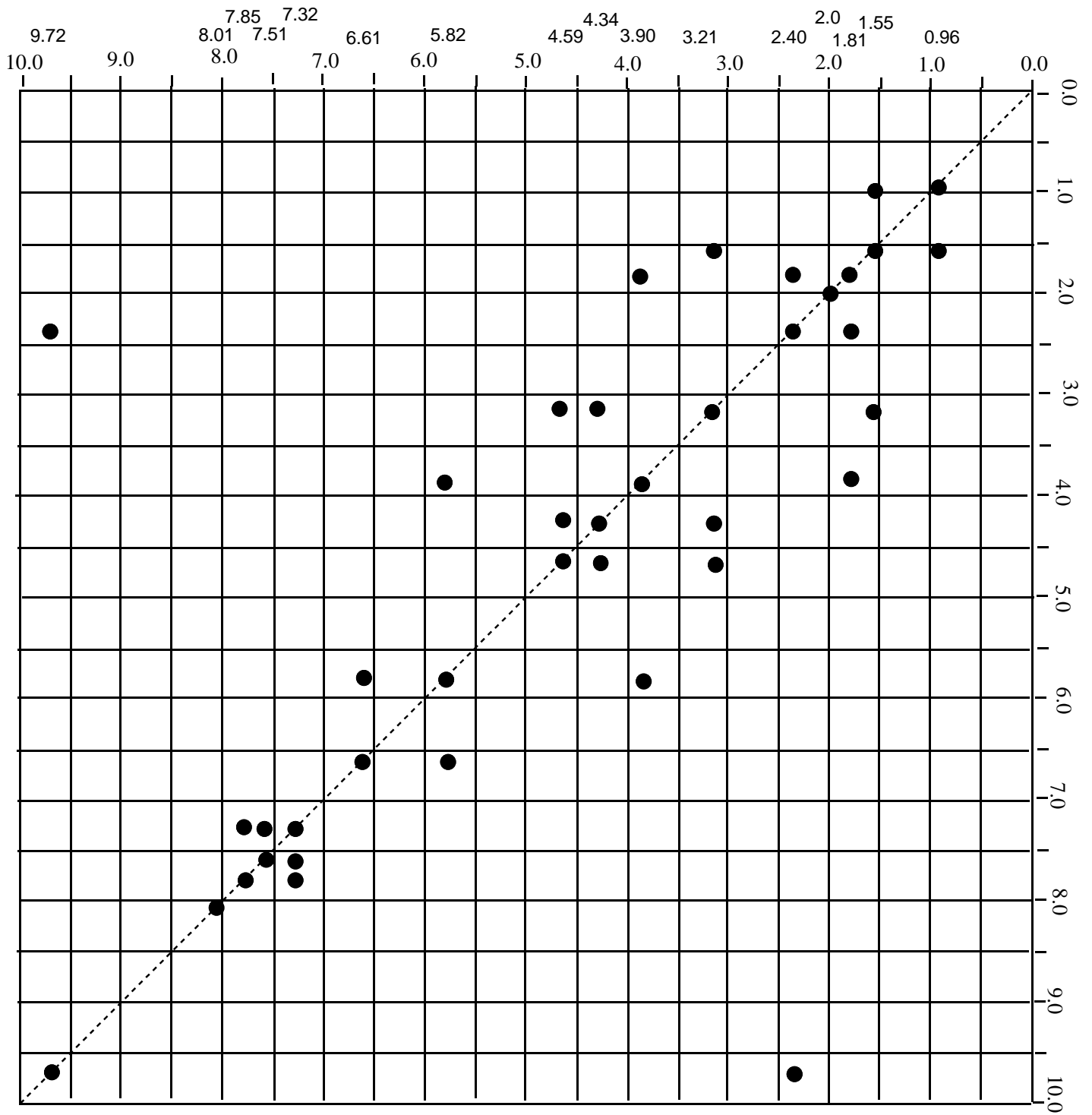
Middle spectrum = DEPT-90 ^{13}C NMR - only C-H appears (up)

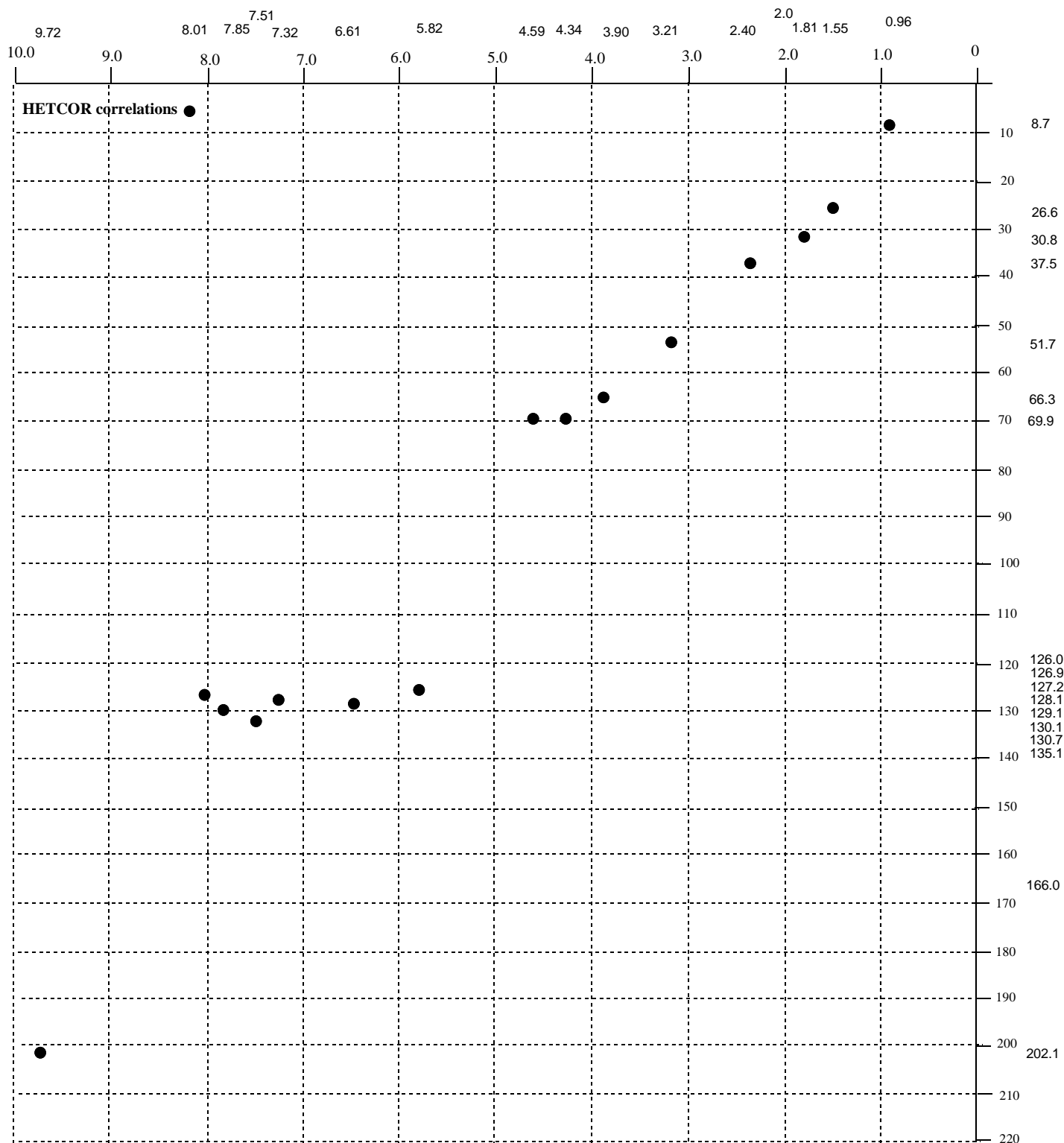


Bottom spectrum = proton decoupled ^{13}C NMR spectrum - shows all types of carbon



COSY: H-H correlations ●





^{13}C	DEPT	HETCOR	COSY	HMBC