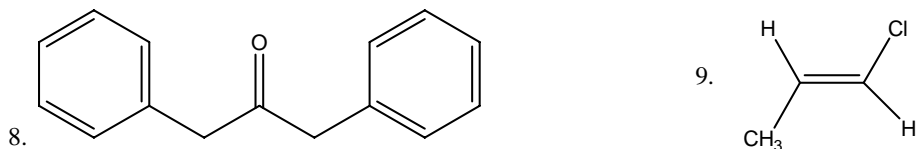
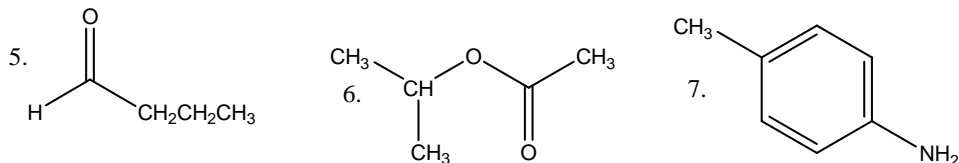
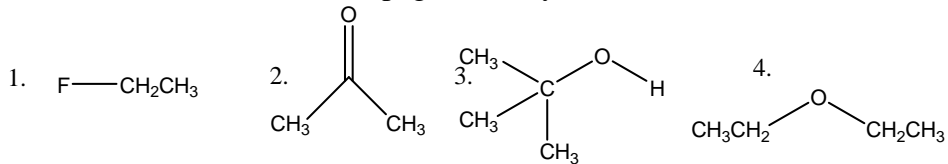


CHEM 235 IN-CLASS #2 NMR ASSIGNMENT (30 pts) Names _____

1. Draw the NMR Spectra for the following compounds. Be sure to entail the correct chemical shift, splitting and integration. For chemical shift information you can use the table shown below (From page 580 of your text.)



#1 (example)

10 9 8 7 6 5 4 3 2 1 0

#2

10 9 8 7 6 5 4 3 2 1 0

#3

10	9	8	7	6	5	4	3	2	1	0
----	---	---	---	---	---	---	---	---	---	---

#4

10	9	8	7	6	5	4	3	2	1	0
----	---	---	---	---	---	---	---	---	---	---

#5

10	9	8	7	6	5	4	3	2	1	0
----	---	---	---	---	---	---	---	---	---	---

#6

10	9	8	7	6	5	4	3	2	1	0
----	---	---	---	---	---	---	---	---	---	---

#7

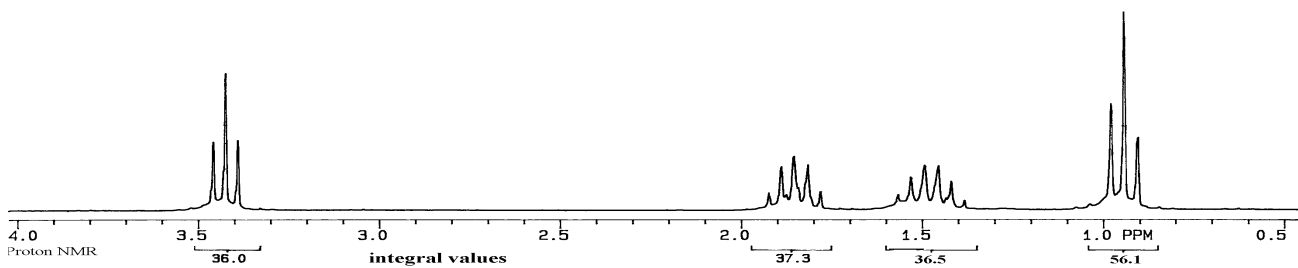
10	9	8	7	6	5	4	3	2	1	0
----	---	---	---	---	---	---	---	---	---	---

#8

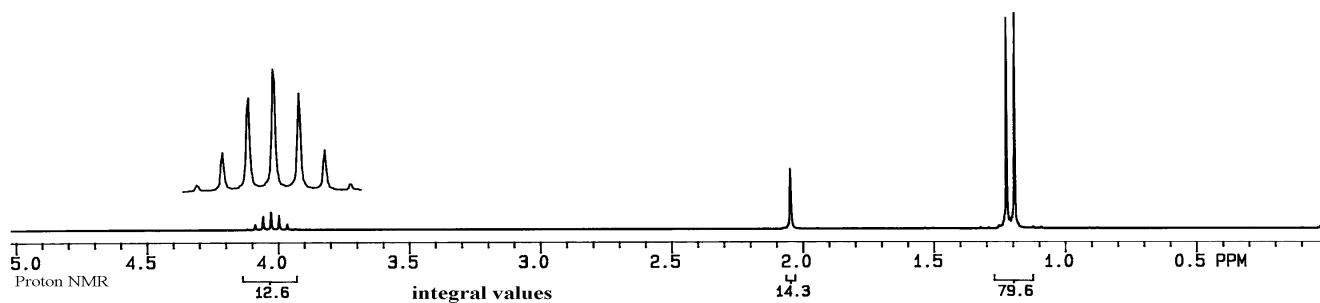
10	9	8	7	6	5	4	3	2	1	0
----	---	---	---	---	---	---	---	---	---	---

2. For compounds A-E draw in the corresponding structures for the following NMRs. The molecular formula for each unknown compounds is given at the top left hand side of each NMR. The integration values (numbers) listed below each peak

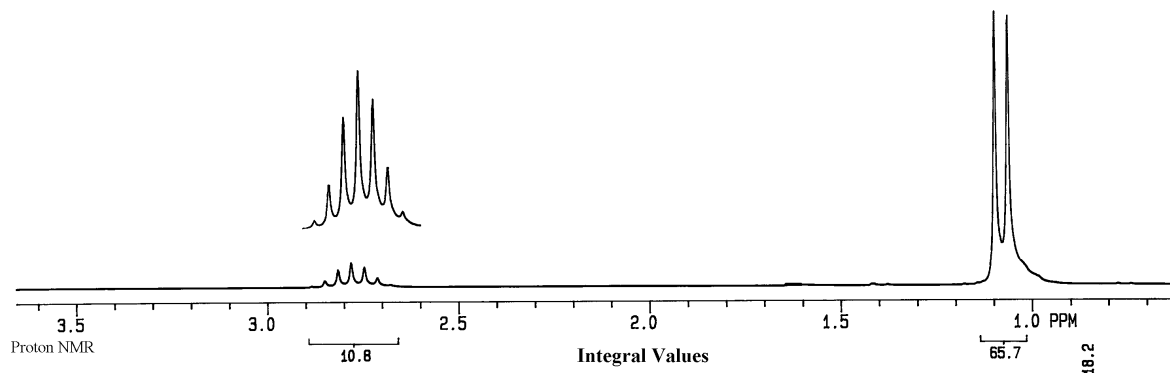
A Molecular formula: C_4H_9Br



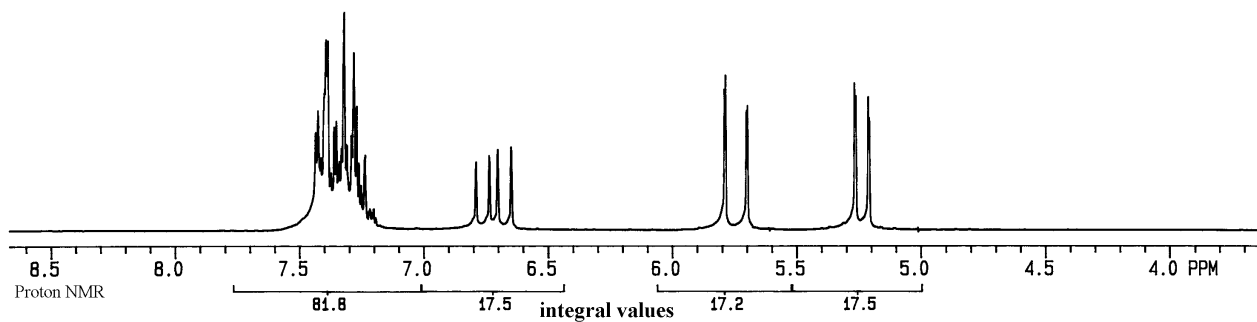
B Molecular formula: C_3H_8O



C Molecular formula: $C_7H_{14}O$

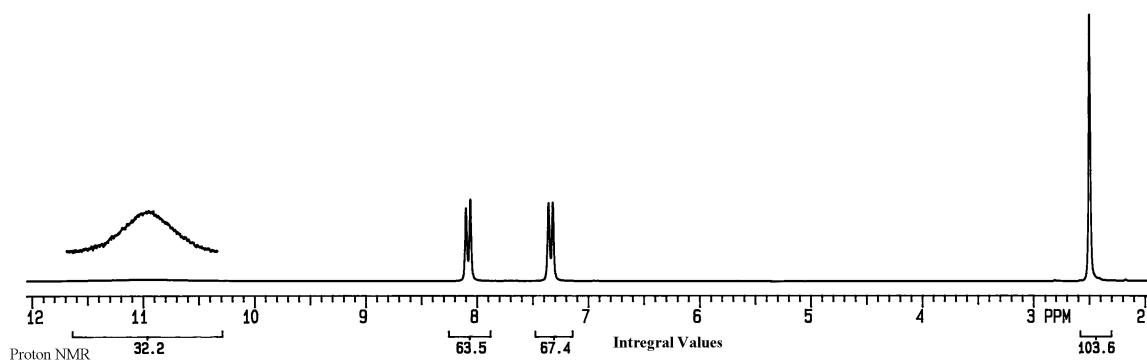


D Molecular formula: C_8H_8



6

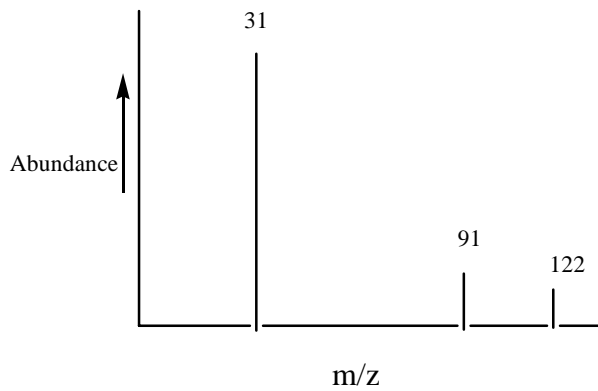
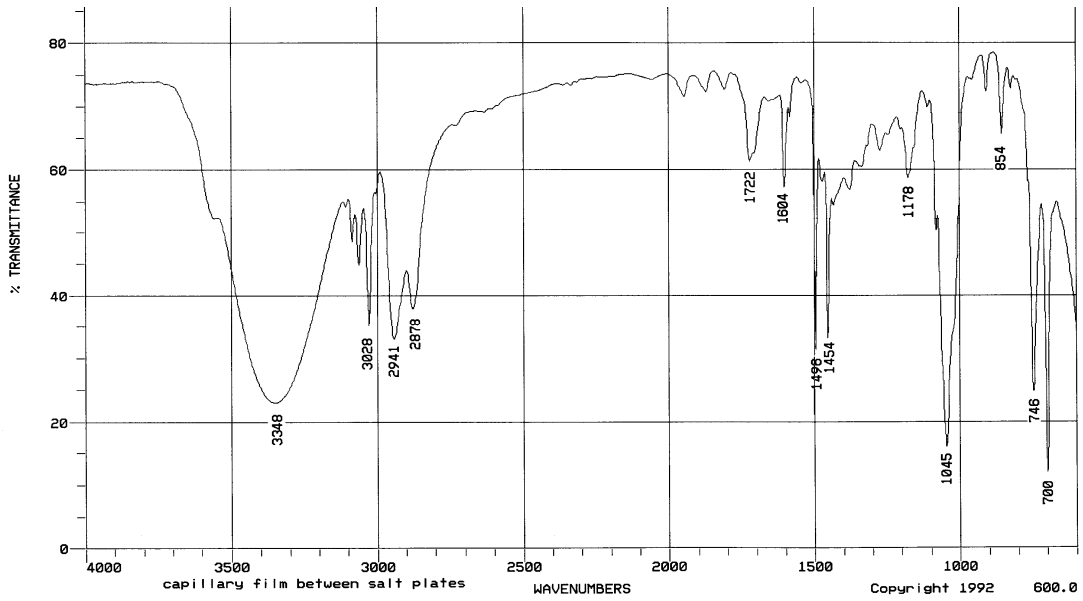
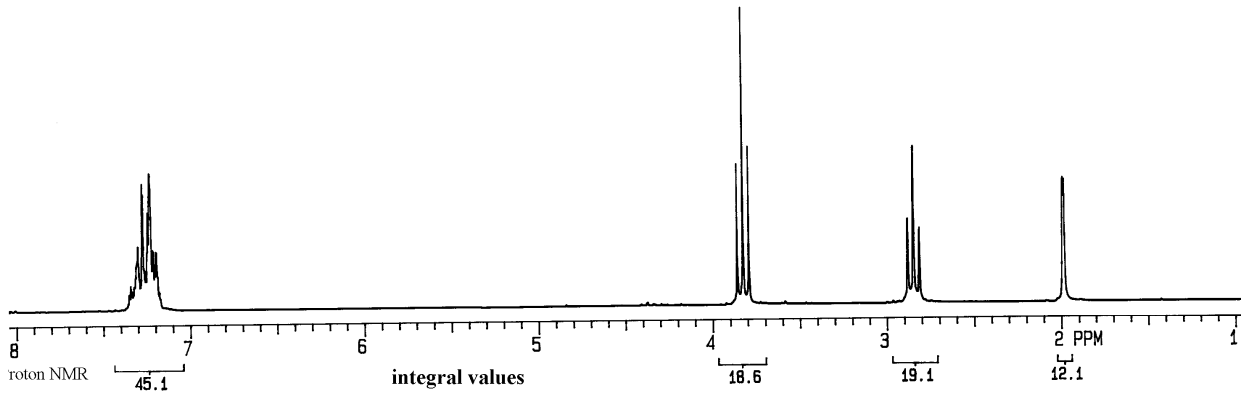
E Molecular formula: $C_8H_8O_2$



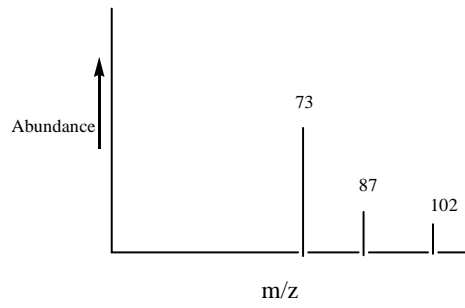
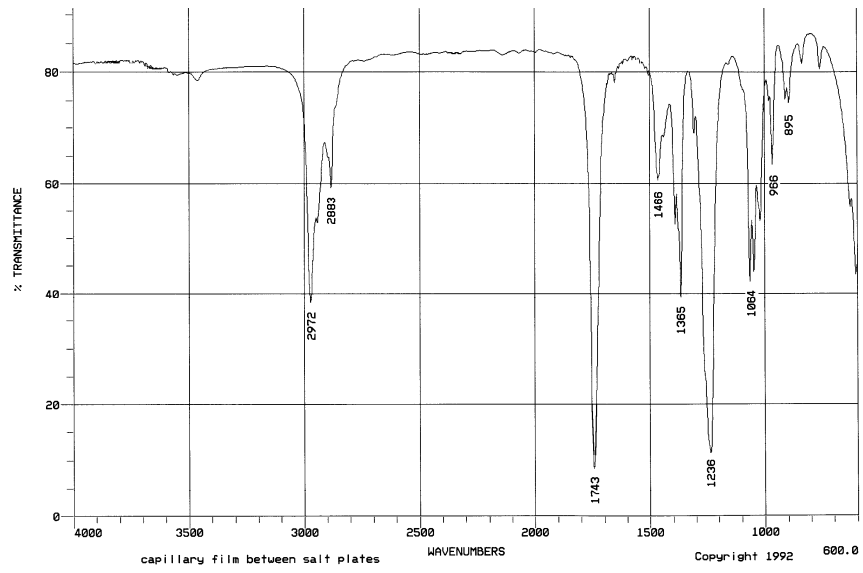
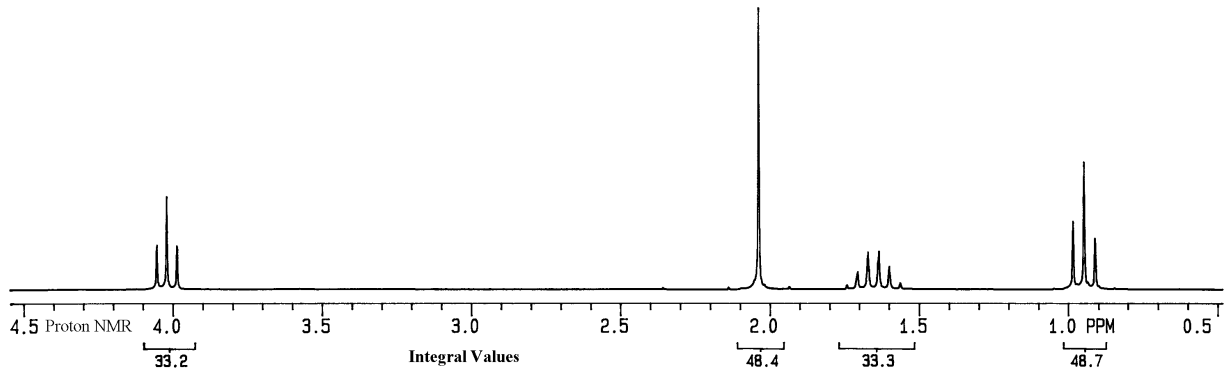
7

3. Determine the structures of compounds F-I using NMR, IR and Mass spec data.

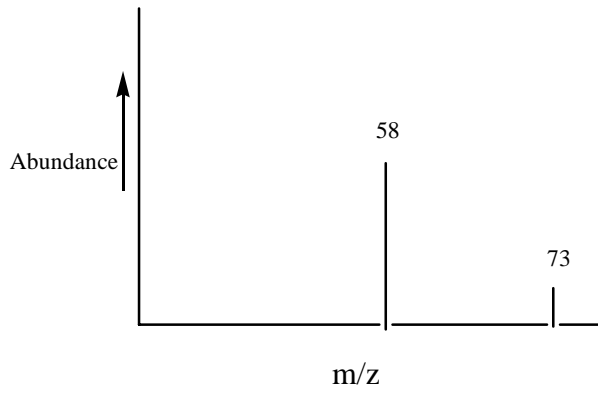
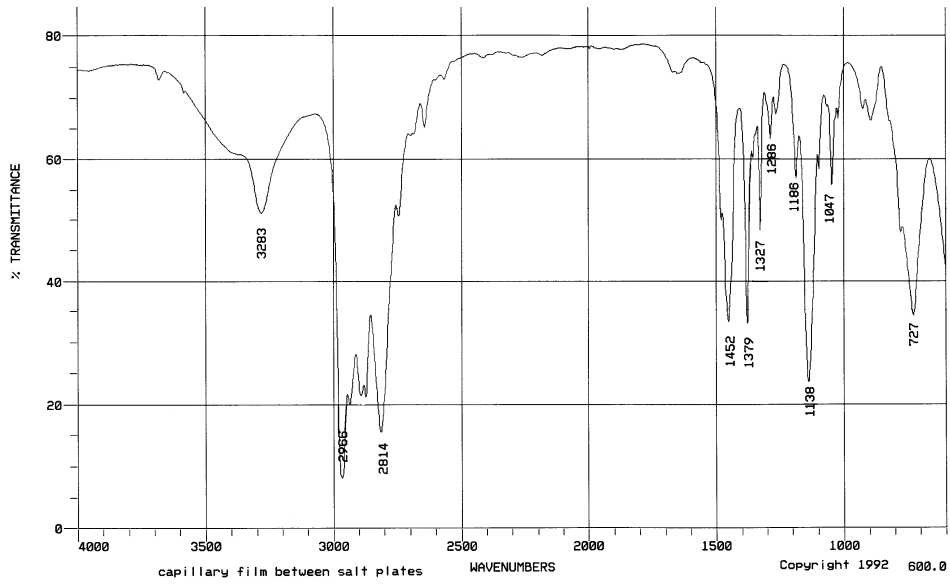
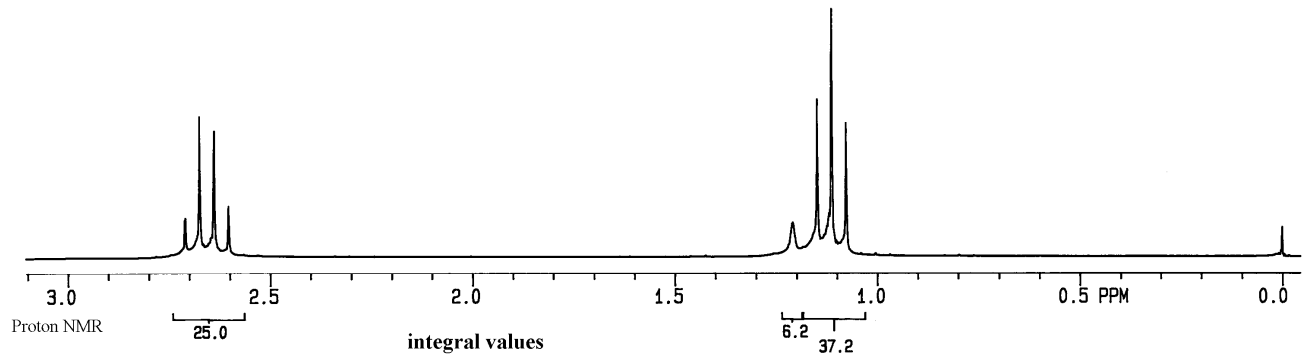
F



G



H



I

