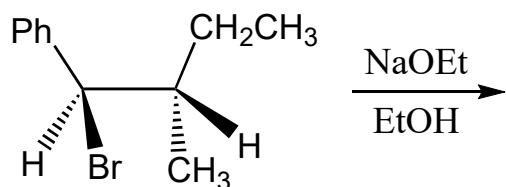
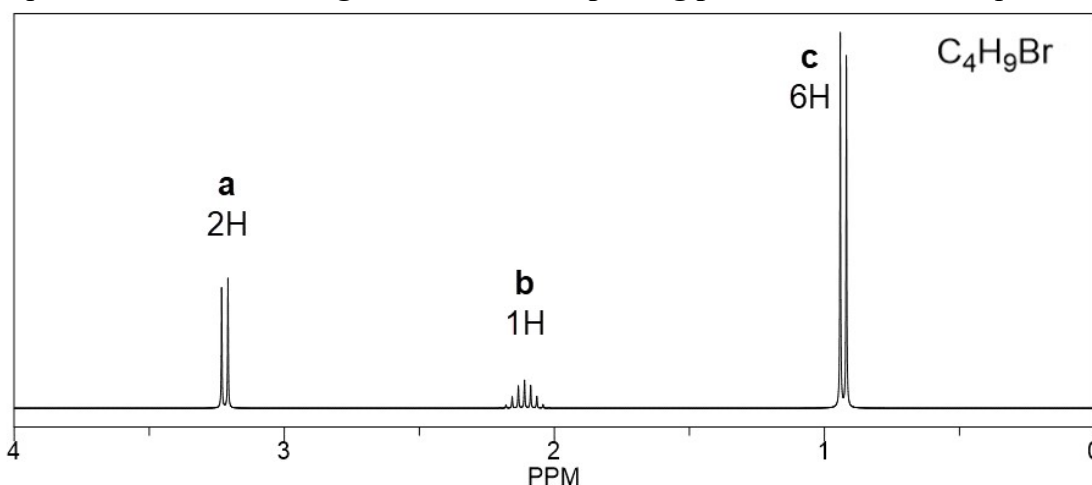


6A) (8 pts) **Predict the major product** for the following E2 elimination reaction and **provide a complete mechanism**. Pay close attention to details, including lone pairs, formal charges and the use of curved arrows. Show how you determined the major product. **No work = no credit.**



6B) (8 pts) Provide a structure that is consistent with the given ^1H NMR spectrum. **Show your work** and justify your answer by **labeling each set of protons on the structure a/b/c** to match the a/b/c peaks in the spectrum, and **confirming the δ value and splitting pattern** for each set of protons. **No work = no credit.**



^1H NMR	
Protons on Carbon	
Type of C-H	δ (ppm)
R-CH ₃	0.9
R-CH ₂ -R	1.3
R ₃ C-H	1.5-2
CH ₃	1.8
	2-2.3
Ar-CH ₃	2.3
RC \equiv C-H	2.5
R ₂ N-CH ₃	2-3
R-CH ₂ -X	3-3.5
RO-CH ₃	3.8
R-CH ₂ -F	4.5
	5-5.3
Ar-H	7.3
	9.7
Protons on Oxygen	
Type of H	δ (ppm)
ROH	0.5-5
ArOH	4-7
	10-13