CHM 201 Final Review – Bonus Clicker Questions
Answer Key
(notes can be found below)

1.	A*	11.	D*	21.	D*
2.	D*	12.	A*	22.	B*
3.	B	13.	D	23.	B
4.	C	14.	D*	24.	B*
5.	C	15.	E*	25.	C*
6.	D*	16.	B*	26.	D*
7.	E*	17.	A*	27.	A*
8.	B*	18.	B*	28.	D*
9.	A*	19.	C*	29.	E*
10.	C	20.	D*	30.	C

1. O-, N+ = net zero charge
2. Resonance stabilized (delocalized charge), so less reactive, weaker base
6. OH forms the strongest hydrogen bonds; III has no H-bonding
7. higher MW, higher bp
8. compare only the two acids (by pKa or stability/reactivity)
9. II and III are cis/trans isomers (diastereomers). Conformer = rotate about sigma bond.
11. nonpolar = lowest; polar = higher; H-bonding = highest
12. OH bond is so polar that it can form hydrogen bonds!
14. Cl and propyl groups are both #1 priority and are on "ze same side"!
15. a hydrogen bond is formed BETWEEN two molecules
16. carbocation stability is the reason behind Markovnikov's Rule
17. the benzylic carbocation is more stable (resonance)
18. staggered is more stable than eclipsed
19. need 4 different groups to be chirality center (R/S)
20. rotate to align Cl's and you will find a plane of symmetry (meso compound)
21. good nucleophile so Sn2 – backside attack
22. phenyl ring is #1 priority
24. carboxylic acid is the most polar functional group, II has no hydrogen-bonding
25. conjugate base is resonance stabilized (less reactive, weaker CB)
26. no Sn2 on C=O and arrows are wrong for proton transfer
27. need a leaving group on C=O for substitution
28. I - EtONa is a better LG; II – equal LG ability
29. ionic compound is most soluble, molecule with large nonpolar chain is least soluble
30. number the atoms to make a 5-membered ring (C=O carbon is E+ and OH oxygen is Nu)