## Chapter 10 Homework Key

16, 17, 20, 21, 27, 30, 41, 45
16. (a) $\mathrm{CH}_{3} \mathrm{CH}_{2}=\mathrm{CH}_{2}$
(b) $\mathrm{H}_{2} \mathrm{C}=\mathrm{CHCl}$
17. (a) $\sim \mathrm{CH}_{2} \mathrm{CH}(\mathrm{C} \equiv \mathrm{N}) \mathrm{CH}_{2} \mathrm{CH}(\mathrm{C} \equiv \mathrm{N}) \mathrm{CH}_{2} \mathrm{CH}(\mathrm{C} \equiv \mathrm{N}) \mathrm{CH}_{2} \mathrm{CH}(\mathrm{C} \equiv \mathrm{N}) \sim \quad$ or

20. (a)

(b)

21.


27. Nylon 88: $\sim \mathrm{CO}\left(\mathrm{CH}_{2}\right)_{6} \mathrm{CO}-\mathrm{NH}\left(\mathrm{CH}_{2}\right)_{8} \mathrm{NH}-\mathrm{CO}\left(\mathrm{CH}_{2}\right)_{6} \mathrm{CO}-\mathrm{NH}\left(\mathrm{CH}_{2}\right)_{8} \mathrm{NH} \sim$
30. $\sim \mathrm{NH}\left(\mathrm{C}_{6} \mathrm{H}_{4}\right) \mathrm{HN}-\mathrm{OC}\left(\mathrm{C}_{6} \mathrm{H}_{4}\right) \mathrm{CO}-\mathrm{NH}\left(\mathrm{C}_{6} \mathrm{H}_{4}\right) \mathrm{HN}-\mathrm{OC}\left(\mathrm{C}_{6} \mathrm{H}_{4}\right) \mathrm{CO} \sim$
or

41. $\sim \mathrm{CH}_{2} \mathrm{C}\left(\mathrm{CH}_{3}\right)_{2} \mathrm{CH}_{2} \mathrm{C}\left(\mathrm{CH}_{3}\right)_{2} \mathrm{CH}_{2} \mathrm{C}\left(\mathrm{CH}_{3}\right)_{2} \mathrm{CH}_{2} \mathrm{C}\left(\mathrm{CH}_{3}\right)_{2} \sim$
or

45. There cannot be a $\mathrm{CH}_{3}$ at the end because it would terminate the sequence (carbon can only have 4 bonds total, this shows 5). This $\mathrm{CH}_{3}$ should not be part of the chain but as a branch to the main chain. The CH is lacking a bond; once again carbon should have 4 bonds, moving the $\mathrm{CH}_{3}$ would fix this issue

