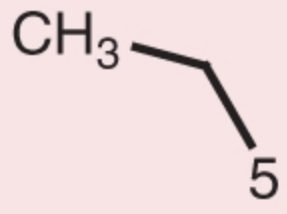
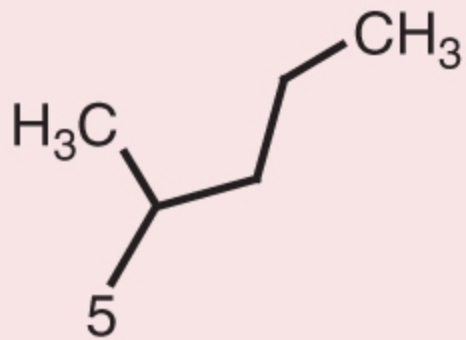
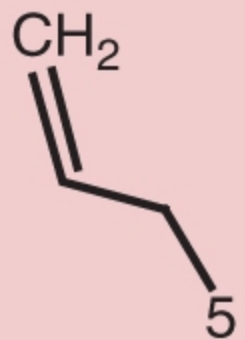
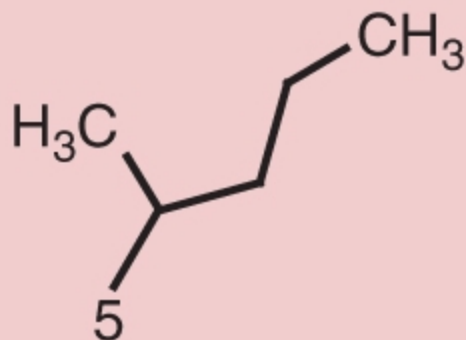
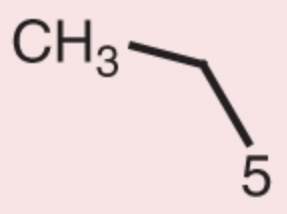
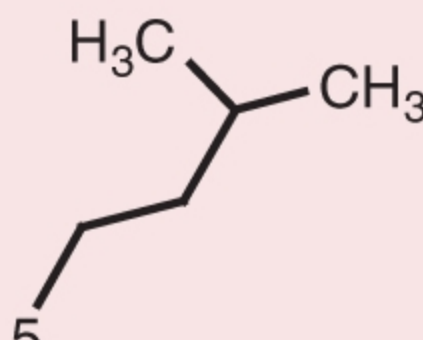
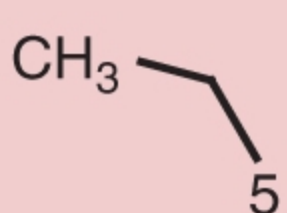
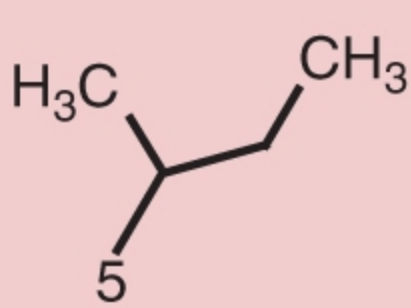
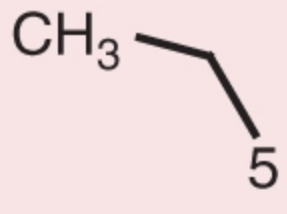
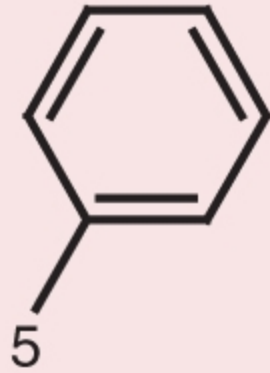


TABLE 15.1 Pharmacokinetic Parameters of Barbiturates Approved for Sedative-Hypnotic Use

Barbiturate	R1	R2	LogP	Onset Time (min) ^d	Duration of action (hour)	Classification
Pentobarbital			2.10 ^a	10–15	3–4	Short-acting
Secobarbital			2.36 ^b	10–15	3–4	Short-acting
Amobarbital			2.07 ^d	45–60	6–8	Intermediate acting
Butobarbital			1.60 ^b	45–60	6–8	Intermediate acting
Phenobarbital			1.46 ^b	30–60	10–16	Long-acting

^a From Freese IE, Levin BC, Pearce R, et al. Correlation between the growth inhibitory effects, partition coefficients and teratogenic effects of lipophilic acids. *Teratology*. 1979;20:413–440.

^b Average determinations from Slater B, McCormack, A, Avdeef A, et al. pH-metric log P.4. Comparison of partition coefficients determined by HPLC and potentiometric methods to literature values. *J. Pharm. Sci* 1994;83:1280–1283

^c From Kakemi K, Arita T, Hori R, et al. Absorption and excretion of drugs. XXXI. On the relationship between partition coefficients and chemical structures of barbituric acid derivatives. *Chem Pharm Bull*. 1967;15:1705–17

^d Upon oral administration.