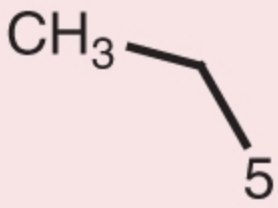
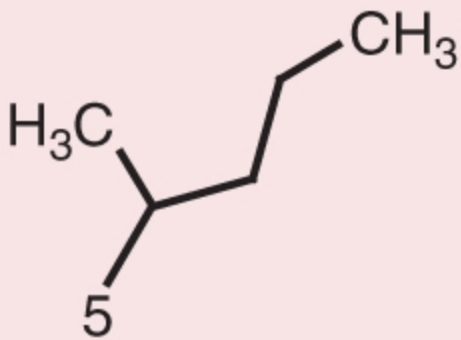

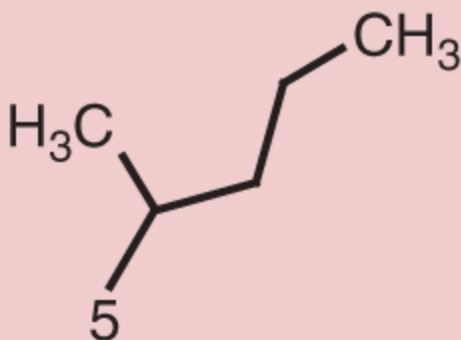
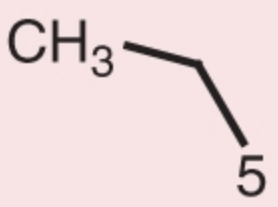
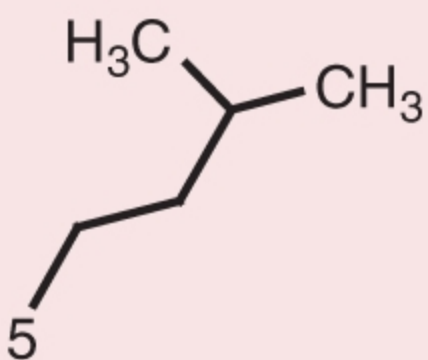
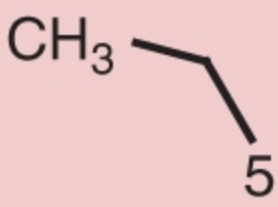
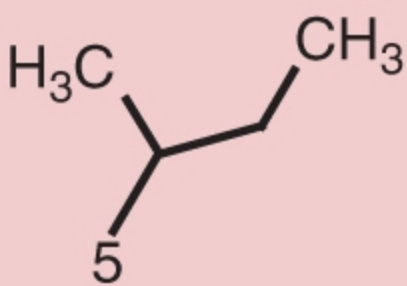
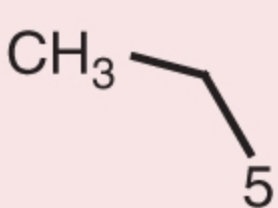
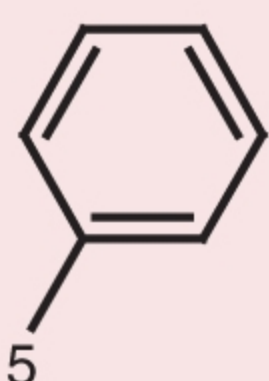


TABLE 15.1 Pharmacokinetic Parameters of Barbiturates Approved for Sedative-Hypnotic Use

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