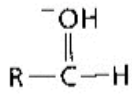
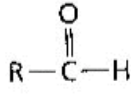
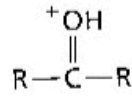
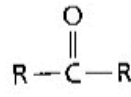
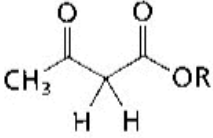
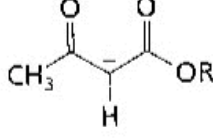
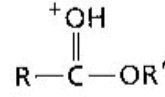
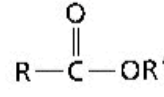
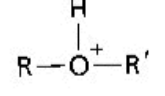
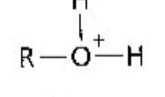
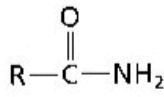
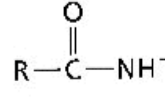
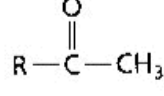
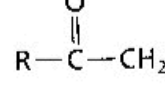
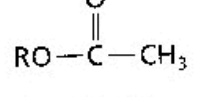
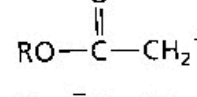
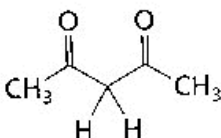
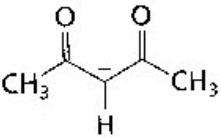
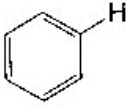
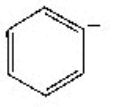


Table 6.3

Acidities of molecules and ions commonly encountered in organic chemistry.^a

Acid	Conjugate base	pK _a	Acid	Conjugate base	pK _a
HClO ₄	ClO ₄ ⁻	-10	HCN	CN ⁻	9.2
HI	I ⁻	-10	NH ₄ ⁺	NH ₃	9.2
		-10	ArOH	ArO ⁻	10
H ₂ SO ₄	HSO ₄ ⁻	-10	R-CH ₂ NO ₂	R- \bar{C} H-NO ₂	10
HBr	Br ⁻	-9	RNH ₃ ⁺	RNH ₂	11
HCl	Cl ⁻	-7	RSH	RS ⁻	11
		-7			11
ArSO ₃ H	ArSO ₃ ⁻	-6.5	CH ₃ OH	CH ₃ O ⁻	15.2
		-6	H ₂ O	HO ⁻	15.7
	R-O-R'	-3.5	RCH ₂ OH	RCH ₂ O ⁻	16
	R-O-H	-2	R ₂ CH-OH	R ₂ CH-O ⁻	17
H ₃ O ⁺	H ₂ O	-1.7	R ₃ C-OH	R ₃ C-O ⁻	17
HNO ₃	NO ₃ ⁻	-1.4			17
HSO ₄ ⁻	SO ₄ ²⁻	2			20
HF	F ⁻	3.1			24
ArNH ₃ ⁺	ArNH ₂	4	R-CH ₂ CN	R- \bar{C} H-CN	25
RCOOH	RCOO ⁻	5	H-C≡C-H	H-C≡C ⁻	25
H ₂ CO ₃	HCO ₃ ⁻	6.4	H ₂	H ⁻	35
H ₂ S	HS ⁻	7	NH ₃	NH ₂ ⁻	38
ArSH	ArS ⁻	7	Ph-CH ₃	Ph-CH ₂ ⁻	40
		9			43
			CH ₂ =CH ₂	CH ₂ =CH ⁻	44
			CH ₄	CH ₃ ⁻	48

^apK_a values from J. March, *Advanced Organic Chemistry*, 4th ed., John Wiley & Sons, New York, 1992, pp. 250-252. Abbreviations: Ar = aryl; Ph = phenyl; R = alkyl.