

ANSWERS

1.	acid	conjugate base	base	conjugate acid
(a)	HCHO_2	CHO_2^-	H_2O	H_3O^+
(b)	$\text{C}_6\text{H}_5\text{NH}_3^+$	$\text{C}_6\text{H}_5\text{NH}_2$	H_2O	H_3O^+
(c)	H_2CO_3	HCO_3^-	OH^-	H_2O
(d)	HSO_4^-	SO_4^{2-}	HPO_4^{2-}	H_2PO_4^-
(e)	HCl	Cl^-	HSO_4^-	H_2SO_4

2. The hydrogen sulfate ion is amphiprotic because the hydrogen sulfate ion can act as an acid or a base. The hydrogen sulfate ion acts as an acid (donates the hydrogen ion) in 1d and acts as a base (accepts the hydrogen ion) in 1e.