

HSO_4^- is conjugate base. But it is

also an acid because it lose H^+ .



'B' has incomplete octet.



Explanation:

Concept	Acid	Base
Bronsted–Lowry	Proton donor	Proton acceptor
Lewis	Electron pair acceptor	Electron pair donor
Arrhenius	Produces H^+ in water	Produces OH^- in water

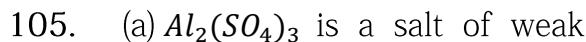
Example:



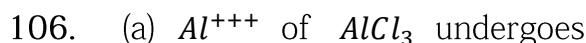
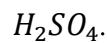
$\rightarrow NH_3$ accepts H^+ , so it is a

Bronsted–Lowry base.

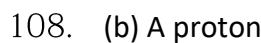
So, correct answer \rightarrow (c)



base $Al_2(OH)_3$ and strong acid



hydrolysis.



Explanation:

Concept	Acid Definition	Base Definition
Bronsted–Lowry	Proton (H^+) donor	Proton (H^+) acceptor

Example:



Here, HCl donates H^+ , so it is a Bronsted–Lowry acid.



111. (b) According to Bronsted principle

HNO_3 is acid they give H^+ in aqueous solution and form NO_3^- .

112. (c) $H_2O + H_2O \rightleftharpoons H_3O^+ + OH^-$.

113. (c) NH_4^+ is a conjugate acid;



114. (a) $AlCl_3 + 3H_2O \rightleftharpoons Al(OH)_3 +$

$3HCl$
Strong acid

115. (c) BF_3

Explanation:

Species	Lewis Acid/Bas e?	Bronsted Acid/Bas e?	Reason
NH_2^-	Lewis base	Bronsted base	Has lone pair \rightarrow can donate e^-
O^{2-}	Lewis base	Bronsted base	Strong base \rightarrow accepts H^+
BF_3	Lewis acid	NOT a Bronsted acid	Electro n pair accepto r, but

Species	Lewis Acid/Bas e?	Bronsted Acid/Bas e?	Reason
OH^-	Lewis base	Bronsted base	Accepts proton (H^+)

116. (d) HCl is a strong acid its

conjugate base means Cl^- is a weak base.

117. (d) Hydrazoic acid (HN_3) is a

Lewis acid.

118. (c) Smaller the pK_a value than.

Stronger the acid.

119. (c) $FeCl_3$

Explanation:

When these salts dissolve in water, they undergo hydrolysis.

Some metal ions act as Lewis acids because they can accept electron pairs from water molecules.

Compound	Behaviour in Water	Acidity
$AlCl_3$	Hydrolyzes	Acidic



Compound	Behaviour in Water	Acidity
BeCl ₂	Weak hydrolysis	Less acidic
FeCl ₃	Strong hydrolysis	Most acidic
None	—	—

Fe³⁺ ion has the highest charge density → it strongly polarizes water molecules → releases H⁺ ions easily → strong acidity.

Hydrolysis Reaction (Word-Friendly):



→ HCl released → solution becomes strongly acidic

120. (c) BF₃ is acidic because due to Lewis concept it accept a lone pair of electron.

