Question #6

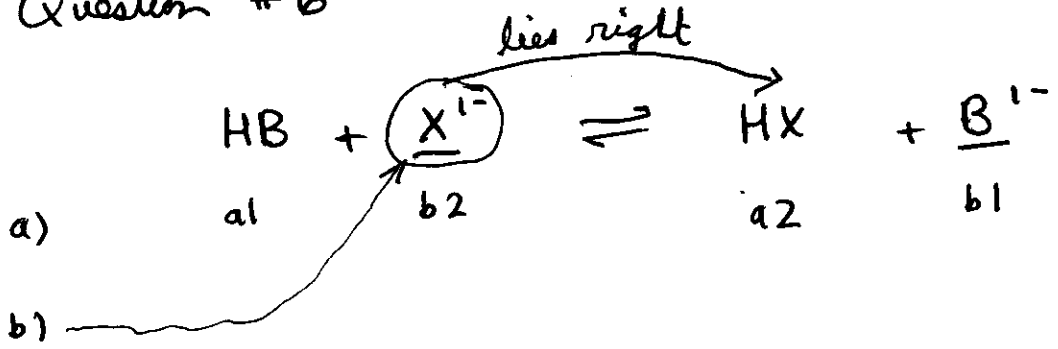
a)

$$\underset{a1}{HB} + \underset{b2}{\underline{X}^{1-}} \rightleftharpoons \underset{a2}{HX} + \underset{b1}{\underline{B}^{1-}}$$

products strongly favoured ∴ lies right

see next page

Question #6



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see next page

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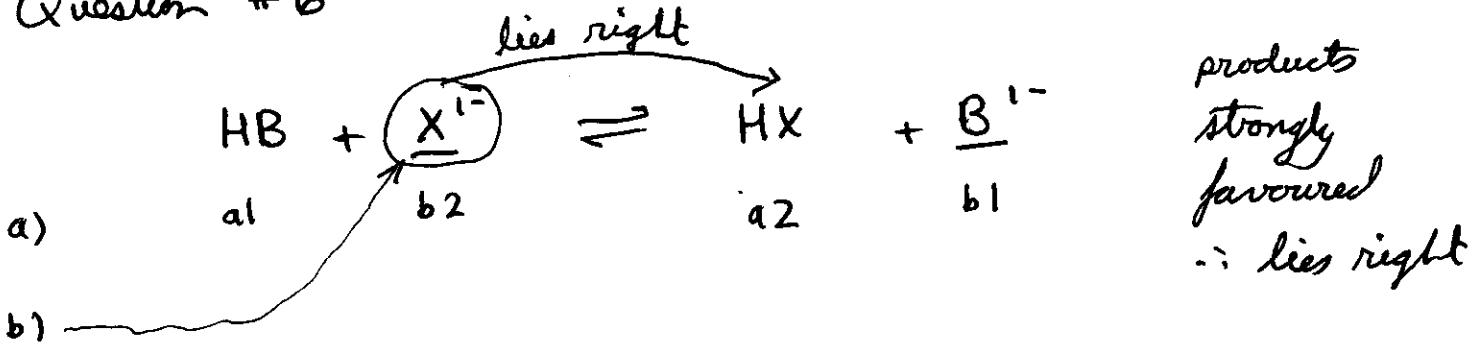

c) HX is the weaker acid. The stronger the base, the weaker the conjugate acid. A stronger base is very good at attracting protons and very poor at releasing the proton once captured. (i.e. the acid form of the base is a weak acid)

d) $K_{eq} = \frac{[prod]}{[react]}$

because $[prod] > [react]$ K_{eq} is large

e) $NaB \rightarrow Na^{1+} + B^{1-}$

S: $\uparrow [B^-]$

R: $\downarrow [B^-]$

H: use B^-

D: shift left