

Ionisation constant of a weak base MOH, is given by the expression

$$K_b = \frac{[M^+][OH^-]}{[MOH]}$$

Values of ionisation constant of some weak bases at a particular temperature are given below:

<b>Base</b>	<b>Dimethylamine</b>	<b>Urea</b>	<b>Pyridine</b>	<b>Ammonia</b>
$K_b$	$5.4 \times 10^{-4}$	$1.3 \times 10^{-14}$	$1.77 \times 10^{-9}$	$1.77 \times 10^{-5}$

Arrange the bases in decreasing order of the extent of their ionisation at equilibrium. Which of the above base is the strongest?

Greater is the ionization constant ( $K_b$ ) of a base, greater is the ionization of the base. Order of extent of ionization at equilibrium is dimethylamine > ammonia > pyridine > urea. Dimethylamine is the strongest base due to maximum value of  $K_b$ .