

NEET EQUILIBRIUM — PH OF STRONG ACID, STRONG BASE AND MIXTURE OF STRONG ACID OR STRONG BASE — PYQS

Max. Marks: 20

Questions: 5

Section A (MCQ) — 5 questions

Q.1 Following solutions were prepared by mixing different volumes of NaOH and HCl of different concentrations :

pH of which one of them will be equal to 1?

A. 60 mL $\frac{M}{10}$ HCl + 40 mL $\frac{M}{10}$ NaOH

B. 55 mL $\frac{M}{10}$ HCl + 45 mL $\frac{M}{10}$ NaOH

C. 75 mL $\frac{M}{5}$ HCl + 25 mL $\frac{M}{5}$ NaOH

D. 100 mL $\frac{M}{10}$ HCl + 100 mL $\frac{M}{10}$ NaOH

[NEET 2018]

(1) B (2) A (3) D (4) C

Scan or tap for the full solution



Q.2 What is the pH of the resulting solution when equal volumes of 0.1 M NaOH and 0.01 M HCl are mixed?

[AIPMT 2015]

(1) 2.0 (2) 7.0 (3) 1.04 (4) 12.65

Scan or tap for the full solution



Q.3 What is the $[\text{OH}^-]$ in the final solution prepared by mixing 20.0 mL of 0.050 M HCl with 30.0 mL of 0.10 M $\text{Ba}(\text{OH})_2$?

[AIPMT 2009]

(1) 0.40 M (2) 0.0050 M

(3) 0.12 M (4) 0.10 M

Scan or tap for the full solution



Q.4 Equal volumes of three acid solutions of pH 3, 4 and 5 are mixed in a vessel. What will be the H^+ ion concentration in the mixture?

[AIPMT 2008]

(1) 3.7×10^{-3} M (2) 1.11×10^{-3} M

(3) 1.11×10^{-4} M (4) 3.7×10^{-4} M

Scan or tap for the full solution



Q.5 The hydrogen ion concentration of a 10^{-8} M, HCl aqueous solution at 298 K ($K_w = 10^{-14}$) is

[AIPMT 2006]

(1) 1.0×10^{-8} M (2) 1.0×10^{-6} M

(3) 1.0512×10^{-7} M (4) 9.512×10^{-8} M

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2	3	4	5						
Ans.	4	4	4	4	3						