

What will be the value of pH of  $0.01 \text{ mol dm}^{-3} \text{ CH}_3\text{COOH}$  ( $K_a = 7.4 \times 10^{-5}$ )?

- (a) 3.4
- (b) 3.6
- (c) 3.9
- (d) 3.0

Ans : a

Use Handerson Hasselbatch equation as:  $\text{pH} = -\log[\text{H}^+]$

$[\text{H}^+] = \sqrt{K_a \cdot c}$