

Chemistry 102_ Quiz 4
Ch 13_ Acids and Bases

Name *Key* ID Sec

1) What is the conjugate base of H_2PO_4^- ? (1mark)

- A) HPO_4^{2-} B) PO_4^{3-} C) H_3PO_4 D) H_3O^+ E) OH^-

2) Which of the following solutions would have the highest pH? Assume that they are all 0.10 M in acid at 25°C. The acid is followed by its K_a value. (1mark)

- A) HF, 3.5×10^{-4} B) HCN, 4.9×10^{-10} C) HNO_2 , 4.6×10^{-4}
D) HCHO_2 , 1.8×10^{-4} ~~E) HClO_2 , 1.1×10^{-2}~~

3) Determine the pH of a 0.22 M NaF solution at 25°C. The K_a of HF is 3.5×10^{-5} . (1mark)

- A) 10.20 B) 5.10 C) 8.90 D) 11.44 E) 2.56

4) Which of the following is a Lewis acid? (1mark)

- A) $\text{Al}_2(\text{SO}_4)_3$ B) CH_4 C) NH_3
D) CHCl_3 E) None of the above are Lewis acids.

5) Which one of the following salt will form a basic solution? (1mark)

- A) FeCl_3 B) K_2CO_3 C) CaBr_2 D) NH_4Br