

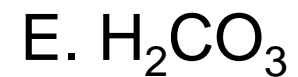
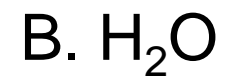
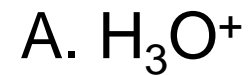
Assessment

Chemistry: Lesson 18



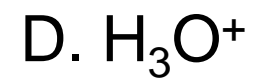
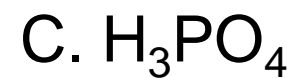
Question 1

What is the conjugate acid of HCO_3^- ?



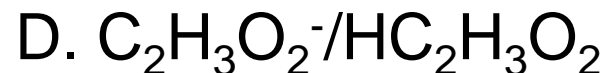
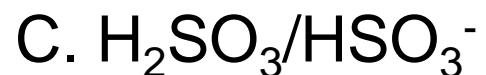
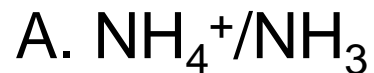
Question 2

What is the conjugate base of H_2PO_4^- ?



Question 3

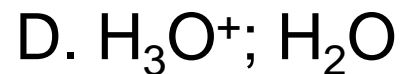
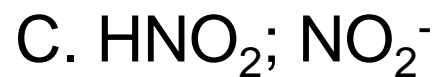
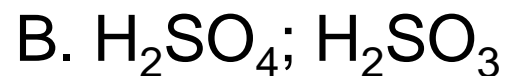
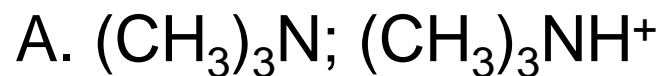
Which of the following is **not** a conjugate acid-base pair?



E. All of the above are conjugate acid-base pairs

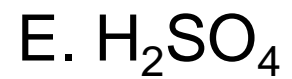
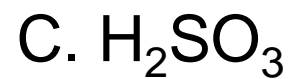
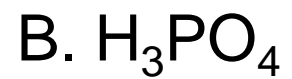
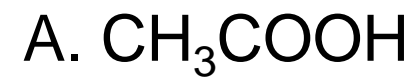
Question 4

Which pair is **not** a conjugate acid-base pair?



Question 5

Identify a triprotic acid.



Question 6

Calculate the pH of a solution that contains $3.9 \times 10^{-4} \text{ M H}_3\text{O}^+$ at 25°C .

- A. 4.59
- B. 3.41
- C. 10.59
- D. 9.41
- E. 0.59

Question 7

Calculate the pH of a solution that contains $2.4 \times 10^{-5} \text{ M H}_3\text{O}^+$ at 25°C .

A. 2.40

B. 9.38

C. 4.62

D. 11.60

E. 4.17

Question 8

Calculate the hydronium ion concentration in an aqueous solution with a pH of 9.85 at 25°C.

A. $7.1 \times 10^{-5} \text{ M}$

B. $4.2 \times 10^{-10} \text{ M}$

C. $8.7 \times 10^{-10} \text{ M}$

D. $6.5 \times 10^{-5} \text{ M}$

E. $1.4 \times 10^{-10} \text{ M}$

Question 9

Calculate the pH of a solution that contains $7.8 \times 10^{-6} \text{ M OH}^-$ at 25°C .

- A. 1.28
- B. 5.11
- C. 12.72
- D. 8.89
- E. 9.64

Question 10

Calculate the pH for an aqueous solution of acetic acid that contains 2.15×10^{-3} M hydronium ion.

A. 4.65×10^{-12} M

B. 2.15×10^{-3} M

C. 2.67

D. 11.33

Question 11

Calculate the pH for an aqueous solution of pyridine that contains 2.15×10^{-4} M hydroxide ion.

A. 4.65×10^{-11}

B. 2.15×10^{-4}

C. 3.67

D. 10.33

Question 12

What is the hydronium ion concentration of an acid rain sample that has a pH of 3.45?

A. $2.82 \times 10^{-11} \text{ M}$

B. $3.55 \times 10^{-4} \text{ M}$

C. 3.45 M

D. 10.55 M

Question 13

What is the hydroxide ion concentration of a lye solution that has a pH of 9.20?

A. $6.31 \times 10^{-10} \text{ M}$

B. $1.58 \times 10^{-5} \text{ M}$

C. 4.80 M

D. 9.20 M

Question 14

A Lewis base is _____.

- A. an electron pair donor
- B. an electron pair acceptor
- C. a proton donor
- D. proton acceptor