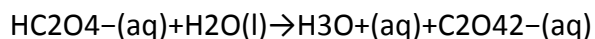


Answer on Question #66941 - Chemistry - Physical Chemistry

Question:

Question 5 : In the following reaction, which is a Brønsted-Lowry base?



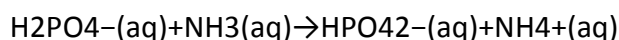
H₃O⁺

H₂O

None of these

HC₂O₄⁻

Question 6 : For the following reaction, which of the following is a conjugate acid-base pair?



None of the above

H₂PO₄⁻ and HPO₄²⁻

H₂PO₄⁻ and NH₃

HPO₄²⁻ and NH₄⁺

Question 7 : A Brønsted-Lowry base is defined as a substance that decreases [H⁺] when placed in water.

acts as a proton donor.

increases [H⁺] when placed in water.

acts as a proton acceptor.

Solution:

Question 5: According to the theory Brønsted-Lowry each pair of particles that are transformed into one another by joining / splitting off of the proton forms a conjugate acid and base. Acid is a proton donor, the base - its acceptor. This proton reaction takes water molecule, so it is an acceptor of protons, ie base. So the correct answer: H₂O.

Question 6: According to the theory Brønsted-Lowry each pair of particles that are transformed into one another by joining (splitting) off of the proton forms a conjugate acid and base, as described above with suitable answers only: HPO₄²⁻ and NH₄⁺. So the correct answer: HPO₄²⁻ and NH₄⁺.

Question 7: According to the theory Brønsted-Lowry in favor reactions basis and particle receiving proton acceptor is acting. So the correct answer: acts as a proton acceptor.

Answer: Question 5: H₂O;

Question 6: HPO₄²⁻ and NH₄⁺;

Question 7: acts as a proton acceptor.