

Charting New Horizons in Education

L1 & L2 - Archive

1&2

Biochemistry

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pH and bonds





- Which one of this can make polar covalent bond?
- 1. CI & H
- 2. K & Na
- 3. P & C
- 4. Mg & Ca
- 5. P&H

- The Henderson Hasselbalch equation:
- 1. Show that ph equal to pka in all conditions
- 2. Ph is less than pka
- 3. Relative between ph, pka, acid concentration, conjugate base concentration.
- 4. Ph is more than pka

- The best buffer occurs when:
- 1. pKa = 1
- 2. pKa > ph
- 3. pH = 7.4
- 4. pH =7
- 5. Conjugate base concentration = weak acid concentration

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- The concentration of acid is 0.35 and the conjugate base is 0.35 and the PH is 4.6 calculate the pka:
- 1. 0.35
- 2. 0.4
- 3. 4.6
- 4. 46
- 5. 50%

• A solution with pH = 5 is _____ with pH = 7?

- 1. 1000 times more basic
- 2. 100 times more acidic
- 3. 10 times more acidic
- 4. 10 times more basic
- 5. 2 times more basic

- The stronger the acid (choose the correct answer)?
- 1. The higher the Ka
- 2. The higher the OH concentration
- 3. The lower the Ka and pKa
- 4. The higher the pH
- 5. The higher the pKa

- Suppose that the acid (CH3COOH) has a pKa = 7.76 was placed in a solution that has a pH=4.25, the dominant form of this acid in the solution will be?
- 1. CH3CO-
- 2. CH3COO-
- 3. CH3CH+
- 4. CH3COOH2
- 5. CH3COOH

• Solution with ph =8 isa solution with ph=10

- 1. 1000 times more basic
- 2. 100 times more acidic
- 3. 10 times more acidic
- 4. 10 times more basic
- 5. 2 times more basic

x Answers

VA

- Q1. A
- Q2. C
- Q3. E
- Q4. C
- Q5. B
- Q6. A
- Q7. E
- Q8. B



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Functional groups and biomolecules





V:A

- The functional group (COOH) is:
- 1. Amine group
- 2. Carboxyl group
- 3. Hydroxyl group
- 4. Phosphate group
- 5. Carbonyl group

- The functional group NH2 is a/an:
- 1. Amine group
- 2. Carboxyl group
- 3. Hydroxyl group
- 4. Phosphate group
- 5. Carbonyl group

- The sugar found in RNA is:
- 1. Sucrose
- 2. Erythrose
- 3. Ribulose
- 4. Ribose
- 5. Deoxyribose

- The sugar found in DNA is:
- 1. Sucrose
- 2. Erythrose
- 3. Ribulose
- 4. Ribose
- 5. Deoxyribose

- The functional group OH is a /an:
- 1. Amine group
- 2. Carboxyl group
- 3. Hydroxyl group
- 4. Phosphate group
- 5. Carbonyl group

- For Ligases enzymes?
- 1. They join two molecules with covalent bonds
- 2. They catalyze isomerization changes within a single molecule
- 3. They catalyze the hydrolysis of various bonds
- 4. They transfer a functional group
- 5. They catalyze oxidation/reduction reactions

x Answers

- Q1. B
- Q2. A
- Q3. D
- Q4. E
- Q5. C
- Q6. A



«Wherever the art of medicine is loved, there is also a love of humanity.»

- Hippocrates-



