

# RS- Biochemistry

Archive

Lecture 1

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1. Which value of  $pK_a$  indicates more acidity?

- A) 2
- B) -1
- C) -2
- D) -3
- E) 1

Ans:A

2. Why is bicarbonate a good buffer for organic acids?

- a) Its  $pK_a$  is suitable for blood pH.
- b) It has a high concentration in the body.
- c) It can absorb excess heat.
- d) It is soluble in lipid

Ans:A

3. which of the following is false :

- A) 20% of  $CO_2$  is transported by carbaminoHb.
- B) 10% of  $CO_2$  is transported as dissolved in plasma.
- C) Carbonic anhydrase has reverse direction in the lung that forms  $CO_2$ .
- D) Alkalosis is caused by  $CO_2$  retention.
- E) 70% of  $CO_2$  is transported as bicarbonate ions in the blood.

Ans:D

4. which of the following are true :

- A)  $pH$  more than  $pK_a$  means the buffer is more effective
- B)  $pH$  less than  $pK_a$  means the buffer is more effective
- C) in our blood plasma acid and base concentrations are equal
- D)  $pH$  close to  $pK_a$  means the buffer is more effective

Ans:D

5. Conjugate base :

- A.  $HPO_4^{2-}$
- B.  $H_2O$
- C.  $H_3PO$
- D.  $H_3O^+$

Ans: A

What is the aim of hyperventilating for 10 minutes before running?

1. Respiratory acidosis
  2. Respiratory alkalosis
  3. Metabolic acidosis
  4. Metabolic alkalosis
- E) Maintain acid-base balance

Ans:B

Which of the following statements about buffers is true?

1. pH higher than pKa means the buffer is more effective.
2. pH lower than pKa means the buffer is more effective.
3. In blood plasma, acid and base concentrations are always equal.
4. pH close to pKa means the buffer is more effective.
5. Buffers are more effective when pH is far from pKa.

Ans:D

