وقل رب زدني علماً

النادي الطبي

RESPIRATORY SYSTEM

HAYAT BATCH

SUBJECT : Biochemistry

LEC NO. : lec 1+2 questions

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Respiratory System

Lecture 1

Q1. How is the digestive system affected by extra mucus in Cystic fibrosis?

A.The mucus can cause stomach ulcers.

B.The mucus can damage the gallbladder in the liver.

C.The mucus can clog the ducts in the pancreas.

D.The mucus can damage the rectum.

E. Answer : B & C are correct**.**

Q2.Dipalmitoyl lecithin acts as:

A.Platelet activating factor.

B.Second messenger for hormones.

C.Lung surfactant.

D.Anti-ketogenic compound.

Q3.Lecithins are composed of:

A.Glycerol + Fatty acids + Phosphoric acid + Choline.

B.Glycerol + Fatty acids + Phosphoric acid + Ethanolamine.

C.Glycerol + Fatty acids + Phosphoric acid + Serine.

D.Glycerol + Fatty acids + Phosphoric acid + Beaine.

Q4.All the following statements about cystic fibrosis are correct except:

A.It is inherited as an autosomal recessive disease.

B.It affects a number of exocrine glands.

C.It causes increased sweating.

D.Sweat chlorides are above 60 mEq/L in this disease.

Q5.Cystic fibrosis mainly affects which body system?

A.Circulatory system.

B.Respiratory system.

C.Digestive system.

D.Nervous system.

E. B & C are correct.

Q6.Sweat chlorides are increased in:

A.Cystic fibrosis.

B.Pancreatic cancer.

C.Acute pancreatitis.

D.All of the above.

E.None of the above.

Q7.Cystic fibrosis is an inherited disease. How is Cystic fibrosis passed down through families?

A.One parent is a carrier of the Cystic fibrosis gene.

B.One grandparent is a carrier of the Cystic fibrosis gene.

C.Both parents are carriers of the Cystic fibrosis gene.

D.More than one answer.

E.Can't be determined due to lack of information.

Q8.Patients with cystic fibrosis have difficulties with digestion because their pancreatic secretions are less able to reach the small intestine, the primary site of lipid digestion.

True.

False.

Q9.What happens to the mucus glands in a child with Cystic fibrosis?

A.Too little mucus is made.

B.The mucus made is too thin.

C.The mucus made is too thick.

D.The mucus builds up in the body.

E.Two answers are correct.

Q10.Phosphatidic acid on hydrolysis yields:

A.Glycerol, fatty acids, phosphoric acid, choline.

B.Glycerol, fatty acids, phosphoric acid.

C.Glycerol, fatty acids, phosphoric acid, Glucose.

D.Sphingol, fatty acids, phosphoric acid.

Q11.The nitrogenous base in lecithin is:

A.Ethanolamine.

B.Choline.

C.Serine.

D.Betaine.

Q12.Sphingomyelins:

A.Phospholipids.

B.Nitrolipids.

C.Alcohols.

D.Two answers are correct.

E.None of the above.

Q13.An infant, born at 28 weeks' gestation, rapidly gave evidence of respiratory distress. Clinical laboratory and imaging results supported the diagnosis of infant respiratory distress syndrome. Which of the following is the most accurate statement about this syndrome?

A.It is unrelated to the baby's premature birth.

B.It is a consequence of too few type II pneumocytes.

C.The lecithin/sphingomyelin ratio in the amniotic fluid is likely to be high (>2).

D.The concentration of dipalmitoylphosphatidylcholine in the amniotic fluid would be expected to be lower than that of a full-term baby.

E.It is treated by administering surfactant to the mother just before she gives birth.

Q14.Sphingomyelins contain a complex amino alcohol named as:

A.Serine.

B.Lysolecithin.

C.Sphingosine.

D.Glycol.

Q15.Regarding emphysema, which of the following is correct?

A.A deficiency of alpha 1 antitryptin is protective.

B.Centriacinar destruction leads to obstructive overinflation.

C.The protease-antiprotease mechanism is the most plausible explanation of the disease.

D.Smokers have an increased number of macrophages in the bronchi.

E.Elastase activity is unaffected by oxygen free radicals.

Answers :

Q1. C

Q2. C

Q3. A

Q4. C

Q5. E

Q6. A

Q7. C

Q8. True

Q9. E

Q10. B

Q11. B

Q12. A

Q13. D

Q14. C

Q15. C

Lecture 2

Q1.In a solution containing phosphate buffer, the pH will be 7.4, if the ratio of Carbonic acid : Sodium bicarbonate is:

A. 4:1

B. 1:10

C. 10:1

D. 20:1

E. 1:20

Q2.The main physiological buffer in the blood is:

A.Haemoglobin buffer.

B.Acetate.

C.Phosphate.

D.Bicarbonate.

Q3.Respiratory alkalosis is caused by:

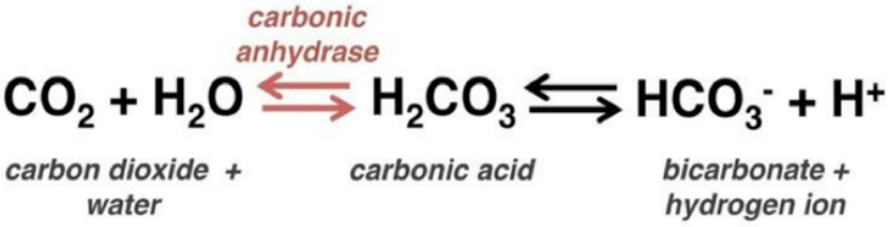
A.An increase in carbonic acid fraction.

B.A decrease in bicarbonic fraction.

C.A decrease in the carbonic acid fraction.

D.An increase in bicarbonate fraction.

Q4.If carbonic anhydrase stopped working in your lungs, the reaction would move to the right.



True.

False.

Q5.Respiratory acidosis occurs in:

A.Any disease which impairs respiration like emphysema.

B.Renal disease.

C.Poisoning by an acid.

D.Pyloric stenosis.

Q6.Respiratory acidosis results from:

A.Retention of carbon dioxide.

B.Excessive elimination of carbon dioxide.

C.Retention of bicarbonate.

D.Excessive elimination of bicarbonate.

Q7.If the pH of blood plasma becomes 7.49 due to ingested substances, ALL of the following would happen to compensate EXCEPT:

A.Respiration rate decreases.

B.The kidney increases secretion of bicarbonate ions.

C.The partial pressure of carbon dioxide in blood would begin to rise.

D.All of the above.

E.None of the above.

Q8.Salicylate poisoning in early stages causes:

A.Metabolic acidosis.

B.Respiratory acidosis.

C.Metabolic alkalosis.

D.Respiratory alkalosis.

Q9.Carbonic anhydrase is used to adjust body pH in the respiratory system. If you hyperventilate, the enzyme carbonic anhydrase will compensate for that change by:

A.Taking Carbonic acid and decomposing it into CO_2 and H_2O.

B.Taking excess CO_2 and H_2O and synthesizing Carbonic Acid.

C.Taking Carbonic acid and convert it into HCO_3^- and H^+.

D.Two answers are correct.

E.The enzyme will not work at all.

Q10.As ventilation increases and more carbon dioxide is removed from the blood:

A.pCO2 will increase.

B.Hydrogen ion concentration of the blood will decrease.

C.Blood pH will decrease.

D.Hydrogen ion concentration of the blood will increase.

E.None of the above.

Q11.In severe acidosis, the output of urea is:

A.Decreased.

B.Slightly increased.

C.Highly increased.

D.Moderately increased.

E.Can't be determined.

Q12.An 18-year-old female with a 15-year history of type 1 diabetes mellitus is brought to the Emergency Department for evaluation of nausea, vomiting, and altered consciousness. Her blood glucose is 560 mg/dl (reference range for random glucose, <200 mg/dl). Her arterial blood pH is 7.15 (reference range is 7.35 to 7.45) and bicarbonate is 24 mEq/l (reference range, 22 to 28 mEq/l). Which of the following is the expected type of compensation in her body in response to this acid–base imbalance?

A.Increased respiration.

B.Increased renal release of acid.

C.Increased renal retention of base.

D.Decreased respiration.

E.Decreased renal release of acid.

Q13.Receptors that detect changes in P_aCO_2 are called:

A.Chemoreceptors.

B.Nocireceptors.

C.pH receptors.

D.Osmoreceptors.

Q14.Hyperventilation (breathing in and out more air than normal) during a panic attack causes an increase in blood _____.

A.Partial pressure of CO_2 and H^+.

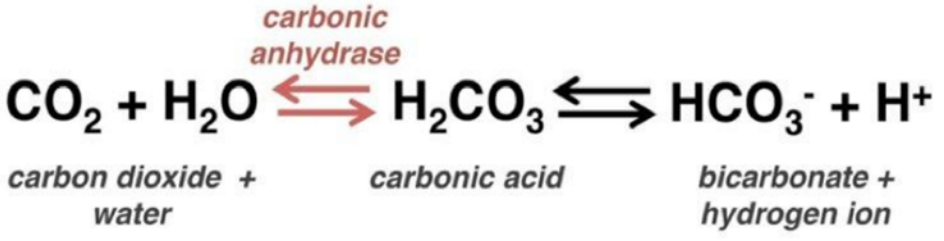
B.pH.

C.H^+.

D.Partial pressure of CO_2.

E.None of the above.

Q15.If carbonic anhydrase stopped working in your systemic tissue, the reaction would move to the right.



True.

False.

Answers :

Q1. E

Q2. D

Q3. C

Q4. False

Q5. A

Q6. A

Q7. E

Q8. D

Q9. A

Q10. B

Q11. A

Q12. C

Q13. A

Q14. B

Q15. True