



☒ Sheet

☐ Slides

Subject :	Test your self
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Number :	Question for 13

Q1) All of the following statements about  $\text{NAD}^+$  are true, EXCEPT?  $\text{NAD}^+$

- A. Is synthesized from the vitamin niacin
- B. Is a cofactor to many dehydrogenase enzymes
- C. Accepts hydride ions and becomes NADH when oxidizing substrates
- D. Contains an ADP group that binds to the enzyme
- E. Can be used to reduce pyruvate to lactate

Q2) All of the following are true, EXCEPT? Pyridoxal phosphate

- A. Is an activation-transfer coenzyme
- B. Is also called vitamin  $\text{B}_{12}$
- C. Often transfers amino groups
- D. Binds to the enzyme
- E. Forms a covalent bond with the substrate

Q3) All of the following are true about biotin EXCEPT? Biotin

- A. Is a coenzyme
- B. Usually removes  $\text{CO}_2$  from substrates
- C. Is a cofactor for carboxylase enzymes
- D. Is a prosthetic group
- E. Forms covalent bonds with  $\text{CO}_2$

Q4) Coenzyme A

- A. Is derived from thiamine
- B. Has a functional group containing cobalt
- C. Forms thioester bonds with substrates
- D. Has a sulfhydryl functional group that reacts only with amino groups
- E. Activates alcohol groups

Q4) Thiamine pyrophosphate

- A. Is synthesized from the vitamin pantothenate (pantothenic acid)
- B. Reacts with glucose
- C. Forms only ionic bonds with substrates
- D. Binds to the carboxyl group of pyruvate
- E. Binds to the alpha-keto group of alpha-ketoglutarate

Q5) Ascorbic acid acts as an :

- A. reducing agent
- B. oxidizing agent
- C. oxidizing and reducing agent both
- D. none of the above

Q6 ) Which of the following are reduced coenzymes?

- A. NADH and FADH<sub>2</sub>
- B. NAD<sup>+</sup> and FAD
- C. ATP and GTP
- D. Coenzyme A and ubiquinone

Q7) Vitamins are essential because the organism

- A. can't synthesize these compounds at all
- B. can synthesize these compounds partially
- C. can't synthesize these compounds in the adequate amounts
- D. none of the above

Q8) The prosthetic group biotin is a carrier of which type of molecule?

- A. Activated carbon dioxide (CO<sub>2</sub>)
- B. Ammonia
- C. Methyl group
- D. Sulfhydryl group

Q9) What enzyme(s) is (are) responsible for the following reaction?



- A) acetyl CoA synthetase
- B) pyruvate decarboxylase
- C) pyruvate dehydrogenase complex
- D) a and b
- E) a, b, and c

10 ) The correct notation for the reduced form of nicotinamide adenine dinucleotide is

- a) NAD<sup>+</sup>
- b) NAD
- c) NADH
- d) NADH<sub>2</sub>

Q11) Which of the following substances does not contain a B vitamin as a structural subunit?

- a) flavin adenine dinucleotide
- b) nicotinamide adenine dinucleotide
- c) coenzyme A
- d) more than one correct response
- e) no correct response

Q12 ) Which of the following would be the name for an enzyme?

- a) succinate dehydrogenase
- b) pyruvate
- c) pepsin
- d) more than one correct response
- e) no correct response