Assignment 2

Dear students,

You have to submit the assignment (two pages).

1. Based on macromolecular structures of vitamin materials, choose the option that correctly presents the assignment of the molecule in order of most abundant.
   a. Choline/Inositol/Phosphatidylcholine
   b. Choline/Inositol/Phosphatidylcholine
   c. Phosphatidylcholine/Choline/Inositol
   d. Choline/Phosphatidylcholine/Inositol

2. Which one of the following statements is correct? The electron transport chain is driven by an energetically unfavorable reaction.
   a. NADH
   b. FADH
   c. ATP
   d. None of the above

3. Which one of the following statements is TRUE? (or FALSE)
   a. The major role of ATPsynthase is to transport protons across the membrane.
   b. ATP synthesis occurs in the thylakoid space.
   c. ATP synthesis occurs in the thylakoid lumen.
   d. None of the above

4. Which one of the following statements is TRUE?
   a. A deficiency in vitamin A causes night blindness.
   b. A deficiency in vitamin B12 causes anemia.
   c. A deficiency in vitamin C causes scurvy.
   d. A deficiency in vitamin D causes rickets.

5. Which one of the following statements is TRUE?
   a. Fumarate reductase is an iron-sulfur protein.
   b. Succinate dehydrogenase is a flavoprotein.
   c. Malate dehydrogenase is a flavoprotein.
   d. PQQ-galactose oxidase is a flavoprotein.

6. Which one of the following statements is TRUE?
   a. The formation of ATP in the electron transport chain occurs in the thylakoid space.
   b. The formation of ATP in the electron transport chain occurs in the thylakoid lumen.
   c. The formation of ATP in the electron transport chain occurs in the mitochondrial matrix.
   d. The formation of ATP in the electron transport chain occurs in the outer mitochondrial membrane.

7. Which one of the following statements is TRUE?
   a. The major role of the electron transport chain is to pump protons across the membrane.
   b. The major role of the electron transport chain is to synthesize ATP.
   c. The major role of the electron transport chain is to generate an electrochemical gradient.
   d. The major role of the electron transport chain is to drive the synthesis of NADH.

8. Which one of the following statements is TRUE?
   a. The electron transport chain consists of four proton pumps.
   b. The electron transport chain consists of five proton pumps.
   c. The electron transport chain consists of six proton pumps.
   d. The electron transport chain consists of seven proton pumps.

9. Which one of the following statements is TRUE?
   a. The electron transport chain is located in the mitochondrial matrix.
   b. The electron transport chain is located in the mitochondrial intermembrane space.
   c. The electron transport chain is located in the inner mitochondrial membrane.
   d. The electron transport chain is located in the outer mitochondrial membrane.

10. Which one of the following statements is TRUE?
    a. Fumarate reductase is a flavoprotein.
    b. Succinate dehydrogenase is a flavoprotein.
    c. Malate dehydrogenase is a flavoprotein.
    d. PQQ-galactose oxidase is a flavoprotein.

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Due on 2023-05-05, 23:59 IST.

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Please submit your assignment before the deadline.

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Assessment rubric

- Accuracy of answers
- Clarity of writing
- Use of scientific terminology

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Details

- Rubric: 1 point
- Total: 1 point

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Teacher's comments:

- Excellent understanding of the material.
- Good use of scientific terminology.
- Well-organized and clear presentation.

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Student's signature:

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Date: 2023-05-05

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Assessment comments:

- Excellent understanding of the material.
- Good use of scientific terminology.
- Well-organized and clear presentation.

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Teacher's signature:

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Date: 2023-05-05