

- **1. Which amino acids are the most frequent at the contact surfaces of protein interacting partners?**
  - a. polar
  - b. charged
  - c. hydrophobic
  - d. aromatic
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- **2. Which secondary structures are involved in *coiled-coil* binding mode?**
  - a. beta-sheets
  - b. beta-sheets and helices
  - c. loops
  - d. intertwining helices
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- **3. interactom is**
  - a. Network of protein-protein interactions (in a given organism)
  - b. Network of interactions of a given protein
  - c. Interaction database of all biomolecules
  - d. Interactions involved in protein complexes
- **4. What parameters must contact surfaces of binding partners fulfill?**
  - a. they must (only) have opposite charges
  - b. they must (only) have complementary surfaces
  - c. they must have complementary characteristics (both shape and polarity)
  - d. they must be hydrophobic
- **5. Provide at least 2 examples of coiled-coil containing proteins:**

- **6. What is the complexom?**
  - a. network of interacting proteins in one cell
  - b. all interactions of one protein
  - c. all protein complexes of a given organism
  - d. network of strong interactions
- **7. How can a post-translational modification of the protein directly influence protein-protein interaction?**
  - a. no way to do it directly
  - b. only via protein conformational change
  - c. can block or enhance the interaction
  - d. by degradation of the protein
- **8. What are the advantages of the protein complex composed of several small subunits (compared to macromolecule composed one big protein)?**
  - a. higher dynamics, modularity, regulation
  - b. higher protein stability
  - c. better access to the protein
  - d. better degradation
- **9. How does the mitochondrial ATP pump work during ADP/ATP conversion?**
  - a. transports Na<sup>+</sup> across the membrane
  - b. utilizes cGMP
  - c. transports K<sup>+</sup> across the membrane
  - d. generates rotation when transporting H<sup>+</sup> across the membrane
- **10. Provide at least 2 examples of molecular machines:**

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