MCM Practice Questions: Lecture Day 1

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Lecture 1: Protein Structure & Function

1) The amino acid residues found in the core of Protein A will most likely interact with each other through what intermolecular forces?

(A) Hydrogen Bonding

(B) London Dispersion Forces

(C) Van der Waals Forces

(D) Covalent Bonds

(E) Ionic Bonding

2) Which of the following is an example of a quartenary structure of a protein?

(A) Catalytic sites

(B) Zinc Finger Motif

(C) Beta Pleated Sheet

(D) Heterotrimeric G- Protein

3) Which of the following characteristics is *characteristic* of Heat Shock Protein 60 (HSP 60)

(A) It binds to the growing protein chain

(B) It prevents protein misfolding

(C) It does not use ATP

(D) It helps newly synthesized proteins fold correctly

4) A 25 year old male presents to the ED with SoB and excess phlegm production. Patient has a history of jaundice and denies smoking & alcohol use. Which of the following enzyme deficiencies is most consistent with the patients symptoms and history?

(A) Alpha-1 Antitrypsin

(B) Hepatic Lipase

(C) Hepcidin

(D) Glucose-6-Phosphate Dehydrogenase

5) A 79 year old woman is brought to her primary care physician for an annual checkup. Her physician has detected a noticeable cognitive decline since their last visit. The physician runs a series of tests and the results show a high level of Amyloid Beta Plaques. What diagnosis is most consistent with these findings?

(A) Rheumatoid Arthritis

(B) Multiple Myeloma

(C) Alzheimer's Disease

(D) Parkinson's Disease

6) A pathologist is examining a slide of red blood cells and notices denatured protein precipitate within the red blood cells. What disease is this a characteristic of?

(A) Hemolytic Anemia

(B) Sickle Cell Disease

(C) Glucose-6-Phosphate Dehydrogenase Deficiency

(D) Creutzfelt-Jakob Disease