



WEEK NO.1

الطب



# METABOLISM

DOCTOR 2019 | MEDICINE | JU

**DONE BY :**

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# **-PLASMA PROTEIN:**

**1-Select the one of the following statements that is NOT CORRECT:**

- A. Albumin is synthesized as a preproprotein.**
- B. Albumin is stabilized by multiple intrachain disulfide bonds.**
- C. Albumin is a glycoprotein.**
- D. Albumin facilitates the movement of fatty acids through the circulation.**
- E. Albumin is the major determinant of plasma osmotic pressure.**

**2-Select the one of the following statements that is NOT CORRECT:**

- A. Wilson disease caused by increased the concentration of the Ceruplasmin in blood**
- B. Wilson disease is characterized by copper toxicosis (abnormally high levels of copper).**
- C. Wilson's disease is an autosomal recessive genetic disease.**
- D. Wilson caused bronzy skin and eyes tissue**

**3- The functions of plasma albumin are:**

- (A) Osmosis (B) Transport**
- (C) Immunity (D) both (A )and (B)**

**4-In one molecule of albumin the number of amino acids is:**

- (A) 510 (B) 585 (C) 610 (D) 650**

**5-Ceruloplasmin is:**

- (A)  $\alpha$ 1-globulin (C)  $\beta$ -globulin**
- (B)  $\alpha$ 2-globulin (D) None of these**

**6-In the total proteins, the percentage of albumin is about:**

- A) 20–40 (C) 50–60**
- (B) 30–45 (D) 80–90**

**7-Molecular weight of human albumin is about:**

- (A) 156,000 (C) 69,000  
(B) 90,000 (D) 54,000

8-Albumin is involved in the transport of all of the following except:

- A) Free fatty acids
- B) Aspirin
- C) Steroids
- D) Some cations
- E) Hemoglobin

- 9-A deficiency in which of the following proteins causes Wilson disease:

- A) Ceruloplasmin
- B) Albumin
- C) C reactive protein
- D) Haptoglobin
- E) Alpha 1 antitrypsin

10-Choose the correctly matched pair of words:

- A) Liver disease – Increased albumin concentration
- B) Bacterial infection – Decreased C reactive protein concentration
- C) Increased alpha 1 antitrypsin concentration –trypsin inactivation
- D) Smoking – oxidation of methionine in elastase
- E) C+D

11-Choose the mismatched pair among the following:

- A) Hemolytic anemia – Elevated Haptoglobin levels
- B) Acute inflammation – Elevated C-reactive protein levels
- C) PiZZ genotype – Decreased activity of Alpha 1 antitrypsin
- D) Down syndrome – Low alpha 1 fetoprotein levels
- E) None of the above

12-True about Prealbumin:

- A) Migrates at a lower speed than albumin in gel electrophoresis
- B) Converted to albumin after cleavage of hexapeptide

- C) Is a sensitive marker of protein malnutrition due to its long half-life**
- D) A+B**
- E) None of the above**

**13-A 50 g sample of plasma was obtained. How many grams of plasma proteins (approximately) would there be in this sample:**

- A) 10 grams**
- B) 3.5 grams**
- C) 45 grams**
- D) 35 grams**
- E) 1 gram**

**14-Which of the following statements regarding blood composition is FALSE:**

- A) Blood of a patient with anemia is expected to contain more than 55% plasma.**
- B) Fibrinogen is present in plasma while absent in serum**
- C) The blood cells that makes up the most of hematocrit are: Red Blood Cells**
- D) The most abundant plasma protein is synthesized in the liver**
- E) None of the above is false**

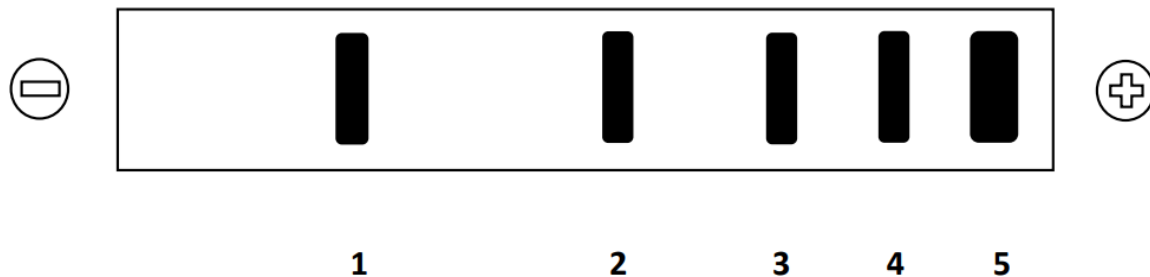
**15-Which of the following proteins would you least expect to be initially tagged with an N-terminal signal peptide:**

- A) Fibrinogen**
- B) Hemoglobin**
- C) Albumin**
- D) Alpha globulins**
- E) Gamma globulins**

16-Which of the following represents a TRUE statement:

- A) Albumin is glycosylated
- B) The main copper-binding plasma protein is albumin
- C) Transferrin oxidizes Fe<sup>2+</sup> to Fe<sup>3+</sup>
- D) Elastase activity is elevated in smokers
- E) Alpha 1 antitrypsin is the main contributor to blood oncotic pressure

17-Gel electrophoresis was applied to a serum sample, and the resulting 5 bands (representing albumin,  $\gamma$ ,  $\beta$ ,  $\alpha_1$ ,  $\alpha_2$  globulins) are shown in the adjacent figure. Which of the bands represents albumin:



- A) Band 1
- B) Band 2
- C) Band 3
- D) Band 4
- E) Band 5

18-Which plasma protein binds iron?

- A) Fibrinogen
- B) Albumin
- C) Transferrin
- D) Gamma-globulins
- E) Haptoglobin

19-What is the most abundant plasma protein in normal individuals?

- A) alpha1-antitrypsin

- B)haptoglobin**
- C)albumin**
- D)gamma globulin**
- E)fibronogen**

**20-Which major class of plasma proteins is not synthesized in the liver?**

- A)alpha1-antitrypsin**
- B)haptoglobin**
- C)albumin**
- D)gamma globulin**
- E)fibronogen**

<b>Ans.</b>	<b>Q.1</b>	<b>Q.2</b>	<b>Q.3</b>	<b>Q.4</b>	<b>Q.5</b>	<b>Q.6</b>	<b>Q.7</b>	<b>Q.8</b>	<b>Q.9</b>	<b>Q.10</b>
	<b>C</b>	<b>A</b>	<b>D</b>	<b>B</b>	<b>B</b>	<b>C</b>	<b>C</b>	<b>E</b>	<b>A</b>	<b>C</b>
<b>Q.11</b>	<b>Q.12</b>	<b>Q.13</b>	<b>Q.14</b>	<b>Q.15</b>	<b>Q.16</b>	<b>Q.17</b>	<b>Q.18</b>	<b>Q.19</b>	<b>Q.20</b>	
<b>A</b>	<b>E</b>	<b>B</b>	<b>E</b>	<b>B</b>	<b>D</b>	<b>E</b>	<b>C</b>	<b>C</b>	<b>D</b>	