Past papers ✔

1-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

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

A)alpha1-antitrypsin

B)haptoglobin

C)albumin

D)gamma globulin

E)fibronogen

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

A) alpha1-antitrypsin

B)haptoglobin

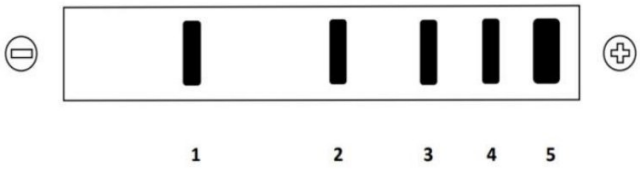
C)albumin

D)gamma globulin

E)fibronogen

4 -Gel electrophoresis was applied to a serum sample, and the resulting 5 bands (representing albumin, **γ**, **β**, **α1**, **α2** 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

1)What cells we can find in the blood (cellular component)?

a. RBCS, WBCS, epithelial cells

b.RBCS, WBCS, platelets

c. Osteoblast, osteoclast, osteocytes

d.Microglial cells, Kupffer cells, mesangial cells

2) Plasma components:

a. Amino acids, LDL, nitrogenous waste, electrolytes,

gases, proteins

b.Amino acids, lipids, nitrogenous waste, bile

pigments, gases, proteins

c. Amino acids, gases, electrolytes, nutrients,

nitrogenous waste, proteins

d. All of the above

3) Choose the correct statement;

a. The shape of the protein determines the function

b.The shape of the protein determines where the protein was synthesized

c. The shape of the protein effects the structure

d.None of the above

4) What is the most common way to purify plasma proteins?

a. Gel electrophoresis
b. Western blotting
c. Immunotherapy
d. .Salting out

5) best known example for polymorphism?

a. ABO blood type

b. Anaemia

c. Cancer

d. More than one of the above

6) A 66 years old woman was admitted to the hospital with severe pain in her abdomen when she was examined the doctors observed severe anaemia and pitting oedema on the effected part of her body and the laboratory results indicate a dramatic decrease in hemoglobin and haptoglobin concentration and it was mentioned that the pain was due chronic blood loss and a chronic disease. What is wrong with the woman?

a. Protein losing gastroenteropathy

b. Alcoholic liver

c. Nephrotic syndrome

d. Fibrosis hepatitis

7) Albumin percentage relative to plasma proteins

a. 50%-60%

b. 10% - 20%

c. 90% -95%

d. None of the above

8) what is the effect of liver failure on the percentage of all proteins

a. Decrease all proteins percentage except immuno-globulins

b. Gamma globulins are not affected

c. The band thickness of all proteins in electrophoresis will decrease

e. a + b

9) If albumin was glycosylated what will happen?

f. a. Increase the viscosity of the blood and it becomes
g. harder to move
h. b. Increase solubility of albumin in the blood
i. c. Other plasma proteins concentration will decrease
j. d. More than one of the above

10) Describe interleukin 1:

a. A gene modifier

b. Signaling molecule

c. Can be considered part of cytokines

d. b + c

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) α1-globulin (C) β-globulin

(B) α2-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^{2+} to Fe^{3+}

D) Elastase activity is elevated in smokers

E) Alpha 1 antitrypsin is the main contributor to blood oncotic pressure

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