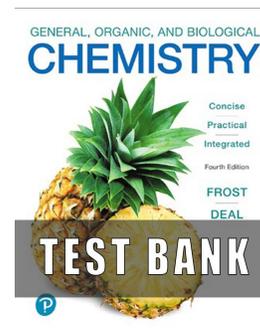


# Body Fluids

1. Which of the following functions is not performed by the aqueous medium of body fluids in the human body?
  - A) Providing nutrients
  - B) Carrying away waste
  - C) Bringing chemicals that allow cells to communicate with each other
  - D) Removing nutrients

Ans: D Difficulty: Easy



2. Which of the following is not true about the distribution of water in an average human body?
  - A) Almost one-third of the water in the body is intracellular fluid
  - B) Almost one-third of the water in the body is extracellular fluid
  - C) Almost two-thirds of the water in the body is intracellular fluid
  - D) Almost one-quarter of the water in the body is interstitial fluid

Ans: A Difficulty: Easy

3. Which of the following statements about body fluids is true?
  - A) Extracellular fluid is the most abundant body fluid
  - B) Interstitial fluid and plasma are the most common intracellular fluids
  - C) Intracellular fluid is the most abundant body fluid
  - D) Intracellular fluid makes up 46% of body fluid

Ans: C Difficulty: Medium

4. Which one of the following is not an example of extracellular fluids that occur in lesser amounts in the human body?
  - A) Urine
  - B) Plasma
  - C) Cerebrospinal fluid
  - D) Lymph

Ans: B Difficulty: Easy

5. What is the approximate percentage of minor components in body fluids?
  - A) 10%
  - B) 8%
  - C) 1%
  - D) 3%

Ans: D Difficulty: Medium

6. Which of the following is not expected to dissolve in the aqueous medium that constitutes body fluids?

- A) Large molecules that have many polar functional groups
- B) Small nonpolar molecules
- C) Electrolytes
- D) Small polar molecules with intermolecular hydrogen bonding capabilities

Ans: B Difficulty: Easy

7. What is the main difference in composition between interstitial fluid and plasma?

- A) Plasma contains less protein
- B) Plasma contains less sodium ( $\text{Na}^+$ )
- C) Plasma contains more chloride ( $\text{Cl}^-$ )
- D) Plasma contains more protein

Ans: D Difficulty: Medium

8. What is the main difference in composition between intracellular and extracellular fluids?

- A) Intracellular fluid contains a high concentration of  $\text{Na}^+$  and  $\text{Cl}^-$
- B) Extracellular fluid contains a high concentration of  $\text{K}^+$  and  $\text{HPO}_4^{2-}$
- C) Protein is most abundant in intracellular fluid
- D) Protein is most abundant in extracellular fluid

Ans: C Difficulty: Medium

9. Which of the following is true about body fluids?

- A) Each type contains the same number of dissolved particles per unit volume
- B) Each type contains different number of dissolved particles per unit volume
- C) The principal cation in extracellular fluid is potassium ( $\text{K}^+$ )
- D) Protein is most abundant in extracellular fluid

Ans: A Difficulty: Easy

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10. Besides  $K^+$  and  $HPO_4^{2-}$ , what ions are present in a much higher concentration in intracellular fluids compared to plasma and interstitial fluids?

- A)  $Na^+$  and  $Cl^-$
- B)  $Mg^{2+}$  and  $SO_4^{2-}$
- C)  $Mg^{2+}$  and  $HCO_3^-$
- D)  $Na^+$  and  $SO_4^{2-}$

Ans: B Difficulty: Difficult

11. If a body contains 42 L of fluid, approximately how many liters are contained in intracellular fluids?

- A) 13 L B) 27 L C) 11 L D) 3 L

Ans: B Difficulty: Difficult

12. If a body contains 42 L of fluid, approximately how many liters are contained in interstitial fluids?

- A) 13 L B) 27 L C) 11 L D) 3 L

Ans: C Difficulty: Difficult

13. If a body contains 42 L of fluid, approximately how many liters are contained in plasma?

- A) 13 L B) 27 L C) 11 L D) 3 L

Ans: D Difficulty: Difficult

14. Which of the following is true about the composition of the blood?

- A) Blood vessels that carry blood from the heart to the tissues are called veins
- B) Blood vessels that carry blood from the tissues to the heart are called arteries
- C) Arteries and veins are connected together by blood vessels called capillaries
- D) Capillaries have very thick walls to prevent waste from entering the interstitial fluid

Ans: C Difficulty: Medium

15. Which of the following is a function of the blood in transport?

- A) Fighting infections and the factors needed for clotting
- B) Maintaining a constant body temperature
- C) Carrying gases ( $O_2$  and  $CO_2$ ) to or from tissues
- D) Carrying gases ( $CO$  and  $H_2$ ) to or from tissues

Ans: C Difficulty: Easy

Body Fluids

16. Which of the following is a function of the blood in regulation?
- A) Fighting infections and the factors needed for clotting
  - B) Maintaining the pH and proper electrolyte concentration in the body
  - C) Carrying nutrients to or from tissues
  - D) Maintaining a constant body pressure

Ans: B Difficulty: Easy

17. Which of the following is a function of the blood in defense?
- A) Fighting the flow of waste to or from tissues
  - B) Fighting infections and promoting clots
  - C) Maintaining a constant body temperature
  - D) Carrying nutrients to or from tissues

Ans: B Difficulty: Easy

18. What is the percent composition of blood in an average human body?
- A) 50% plasma and 50% blood cells
  - B) 40% plasma and 60% blood cells
  - C) 45% plasma and 55% blood cells
  - D) 55% plasma and 45% blood cells

Ans: D Difficulty: Difficult

19. Which of the following is not a type of blood cell?
- A) Erythrocytes
  - B) Leukocytes
  - C) Erythrolytes
  - D) Platelets

Ans: C Difficulty: Easy

20. Which of the following is another name for red blood cells?
- A) Thrombocytes
  - B) Erythrocytes
  - C) Leukocytes
  - D) Platelets

Ans: B Difficulty: Easy

21. Which of the following is another name for white blood cells?
- A) Thrombocytes
  - B) Erythrocytes
  - C) Leukocytes
  - D) Platelets

Ans: C Difficulty: Easy

22. Which blood cells are the most numerous in the blood?
- A) Erythrocytes
  - B) Thrombocytes
  - C) Leukocytes
  - D) Plasma

Ans: A Difficulty: Medium

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23. Which blood cells have no nucleus, no DNA, no ribosomes, and no mitochondria?  
A) Erythrocytes B) Leukocytes C) Thrombocytes D) Plasma

Ans: A Difficulty: Medium

24. Which blood cells have a nucleus, contains glucose, lipids, and proteins?

A) Erythrocytes B) Leukocytes C) Thrombocytes D) Plasma

Ans: B Difficulty: Medium

25. Which blood cells have no nucleus, contain protein and phospholipids?

A) Erythrocytes B) Leukocytes C) Plasma D) Thrombocytes

Ans: D Difficulty: Medium

26. Which of the following statements about an anemic condition is true?

A) The number of leukocytes is abnormally low

B) The number of erythrocytes is abnormally low

C) The number of erythrocytes is abnormally high

D) The number of leukocytes is abnormally high

Ans: B Difficulty: Medium

27. What is a possible observation for an individual with a viral disease?

A) A lower-than-normal level of erythrocytes

B) A higher-than-normal level of leukocytes

C) A higher-than-normal level of erythrocytes

D) A lower-than-normal level of leukocytes

Ans: D Difficulty: Medium

28. What is a possible observation for an individual with an acute bacteria infection?

A) A lower-than-normal level of erythrocytes

B) A higher-than-normal level of leukocytes

C) A higher-than-normal level of erythrocytes

D) A lower-than-normal level of leukocytes

Ans: B Difficulty: Difficult

29. In terms of life span, arrange the blood cells from greatest to lowest life span; erythrocytes, leukocytes, and plasma.  
A) Erythrocytes > leukocytes > platelets C) Erythrocytes > platelets > leukocytes  
B) Leukocytes > platelets > erythrocytes D) Platelets > erythrocytes > leukocytes

Ans: C Difficulty: Difficult

30. Which of the following can result in excessive bleeding?  
A) Low platelet count C) Low leukocyte count  
B) High platelet count D) High leukocyte count

Ans: A Difficulty: Difficult

31. Which of the following can lead to clot formation?  
A) Low platelet count C) Low leukocyte count  
B) High platelet count D) High leukocyte count

Ans: B Difficulty: Difficult

32. Which of the following is true about blood plasma?  
A) It is 29% water B) It is 62% water C) It is 95% water D) It is 92% water

Ans: D Difficulty: Medium

33. Which of the following is a major component of blood plasma?  
A) Carbohydrates B) Proteins C) Lipids D) Vitamins

Ans: B Difficulty: Medium

34. Which of the following is not found in blood plasma?  
A) Hormones B) Electrolytes C) Steroids D) Urea

Ans: C Difficulty: Medium

35. Which of the following is the most abundant plasma protein?  
A) Albumins B) Fibrinogen C) Globulins D) Thrombin

Ans: A Difficulty: Medium

36. Which plasma protein is responsible for blood clot?  
A) Albumins B) Fibrinogen C) Globulins D) Thrombin

Ans: B Difficulty: Medium

37. Which plasma protein is responsible for combatting infections?  
A) Albumins B) Fibrinogen C) Globulins D) Thrombin

Ans: C Difficulty: Medium

38. In the multistep mechanism of clotting, how many clotting factors are involved?  
A) 4 B) 8 C) 10 D) 12  
Ans: D Difficulty: Medium
39. What vitamin deficiency causes excessive bleeding?  
A) Vitamin A B) Vitamin C C) Vitamin D D) Vitamin K  
Ans: D Difficulty: Medium
40. Which of the following is a naturally occurring anticoagulant?  
A) Heparin B) Warfarin C) Zymogen D) Hepalant  
Ans: A Difficulty: Medium
41. Which of the following explains why fibrinogen, and not fibrin, is stored in the blood?  
A) Fibrinogen is an insoluble protein while fibrin is a soluble protein  
B) Fibrinogen is a soluble protein while fibrin is an insoluble protein  
C) Both fibrinogen and fibrin are soluble proteins but fibrinogen is smaller  
D) Both fibrinogen and fibrin are insoluble proteins but fibrin is smaller  
Ans: B Difficulty: Difficult
42. Which of the following is true of the composition of a centrifuged whole blood sample?  
A) The top layer contains plasma, the bottom layer contains red blood cells, and the narrow band in between contains white blood cells and platelets  
B) The top layer contains plasma, the bottom layer contains white blood cells and platelets, and the narrow band in between contains red blood cells  
C) The top layer contains red blood cells, the bottom layer contains plasma, and the narrow band in between contains white blood cells and platelets  
D) The top layer contains white blood cells and platelets, the bottom layer contains red blood cells, and the narrow band in between contains plasma  
Ans: A Difficulty: Difficult
43. What protein is used by red blood cells in the transport of oxygen and carbon dioxide?  
A) Hemoglobulin B) Fibrin C) Zymogen D) Hemoglobin  
Ans: D Difficulty: Easy
44. What is the maximum number of oxygen molecules carried by hemoglobin?  
A) 2 B) 3 C) 4 D) 6  
Ans: C Difficulty: Easy
45. Which of the following is not a factor that affects the amount of oxygen bound to hemoglobin?  
A) Temperature