Blood Study Questions

Dr. J. Lim

1. Blood is more viscous than water. This agrees with the old adage that blood is _____ than water.
2. Is circulating blood warmer or cooler than the average body temperature? State blood's expected temperature.

3. Name four substances transported in the blood.

4. State the two components that comprise blood. Give at least one example of each component.

5. Where are the formed elements of the blood manufactured? _____
6. Which type of blood cell is most numerous by a large margin? _____
7. What is the shape of an erythrocyte? _____
8. State the three components of red blood cells.

9. Erythrocytes are well designed and efficient transporters of _____.

10. This part of hemoglobin can bind with an oxygen molecule. _____

11. One hemoglobin molecule combines with _____ oxygen molecules

12. One red blood cell has _____ million hemoglobin molecules.

13. One red blood cell can transport _____ oxygen molecules.

14. Another name for white blood cells is _____.

15. State the major function of white blood cells. _____

16. Another name for platelets is _____.

17. State the major function of platelets. _____

18. Plasma is 90% _____.

19. By volume, does blood contain more formed elements or plasma? _____

Blood Study Questions KEY

Dr. J. Lim

1. Blood is more viscous than water. This agrees with the old adage that blood is **thicker** than water.
2. Is circulating blood warmer or cooler than the average body temperature? State blood's expected temperature. **Warmer at about 100.4F**
3. Name four substances transported in the blood.

   Oxygen, carbon dioxide, nutrients (ex: glucose) ions (ex: calcium), plasma proteins (ex: fibrinogen), hormones, cellular waste products, water, formed elements (WBC, RBC & platelets)

4. State the two components that comprise blood. Give at least one example of each component.

   Formed elements – RBC, WBC (leukocytes), thrombocytes (platelets)
   Plasma – nutrients, ions, gases, hormones, plasma proteins, waste

5. Where are the formed elements of the blood manufactured? **Red bone marrow**
6. Which type of blood cell is most numerous by a large margin? **Erythrocytes (red blood cells or RBCs)**

7. What is the shape of an erythrocyte? **Biconcave disc**
8. State the three components of red blood cells.

   Hemoglobin, plasma membrane and cytosol
9. Erythrocytes are well designed and efficient transporters of **oxygen**.

10. This part of hemoglobin can bind with an oxygen molecule. **Iron ion**

11. One hemoglobin molecule combines with **four (4)** oxygen molecules

12. One red blood cell has **250** million hemoglobin molecules.

13. One red blood cell can transport (**250 million X 4 =) 1 billion** oxygen molecules.

14. Another name for white blood cells is **leukocyte**.

15. State the major function of white blood cells. **Body defense**

16. Another name for platelets is **thrombocyte**.

17. State the major function of platelets. **Aid in blood clotting**

18. Plasma is 90% **water**.

19. By volume, does blood contain more formed elements or plasma? **Plasma (55%)**