

## **Test Review: Topics 8-11**

### **Blood, Blood Types, Circulatory and Lymphatic**

1. What are the blood components and formed elements?

Plasma, RBC, WBC, platelets

2. What is the function of RBC?

Transports carbon dioxide and oxygen

3. What part of the RBC makes blood red?

hemoglobin

4. What are the 2 functions of WBC?

1) get rid of debris and dead rbc

2) neutralize antigens to create antibodies and fight infections

5. What is the function of antibodies?

Neutralize antigens of a foreign substance. Protects the body. Immune response

6. Explain how the body will fight a cold?

Virus antigens will increase in the body causing the body to increase the body's temperature to help kill the virus bacteria which cannot necessarily thrive with a high temperature. The fever activates the white blood cell production in the body so that it can fight the infection (increase antigens, increase fever, increase antibodies)

7. What is a vaccination?

Dead or weakened antigen that is injected into the blood to allow the WBC to create antibodies against that antigen.

8. What is the function of vaccinations?

Artificial acquisition of immunity to a specific disease. Creates antibodies so if the antigen does enter your body, the immune response is much faster and the body recognizes what it is and creates the right antibodies to fight it.

9. What 2 ways can someone become immune to a disease?

Artificial – vaccines

Natural – actually getting the infection and creating antibodies against it naturally.

10. What is the function of platelets?

In the event that a blood vessel gets damaged or you are bleeding, the platelets are responsible for forming a clot to stop the bleed (scab)

11. What is the function of plasma?

Transportation : nutrients, waste, oxygen, carbon dioxide, hormones and antibodies.

12. What are the three types of antigens which exist for blood types?

A, B and Rh

13. How is a person's blood type acquired?

Hereditary

14. Why is O- the universal donor and AB+ the universal recipient?

O- has not antigens and therefore no antibodies against it. AB+ has all the antigens and therefore no antibodies in the plasma.

15. Why can a – give to a +, but a + can not give to a -?

Because A- has anti-Rh which would cause a clumping reaction with the anti-Rh in the A- blood.

16. Who can A- donate and receive from?

A- and O-

17. Who can B+ donate and receive from?

Receive: B+, B-, O+, O-

Donate: B+ and AB+

18. Who can AB- donate and receive from?

Receive: A-, B-, AB-, O-

Donate: AB- and AB+

19. Who can O+ donate and receive from?

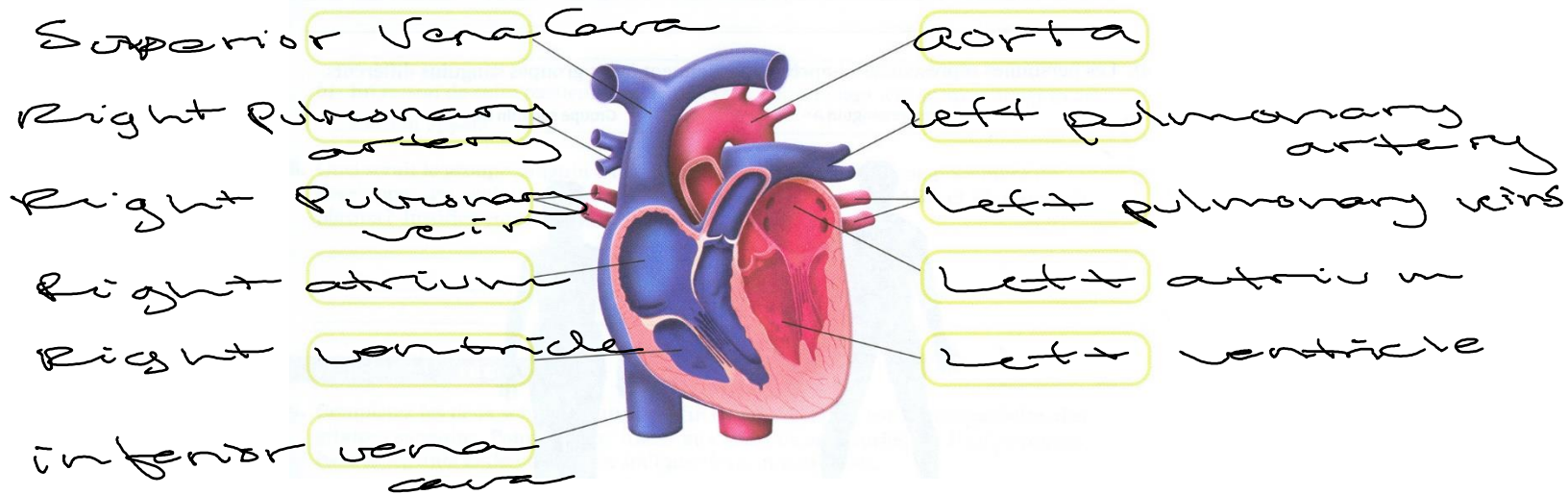
Receive: O+, O-

Donate: B+ and AB+, A+ and O+

20. What is a person's blood type if they can receive from A-, AB-, B- and O- and donate to AB- and AB+? AB-

21. If a person has agglutination with Anti A, Anti B but not Rh, what is their blood type? AB-

22. Complete the following schema.



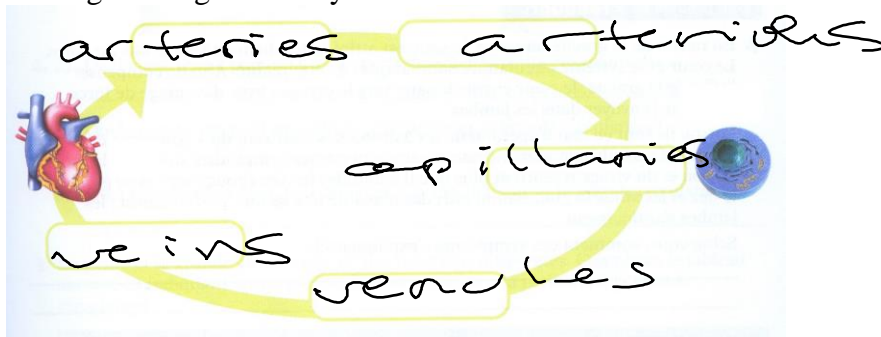
24. What is the function of a valve? **Prevents backflow**

25. Like every other muscle, the heart needs nutrients and oxygen to work. It also needs to get rid of the wastes produced by its cells. What is the name of the blood vessels that supply blood to the heart itself? **Coronary vessels**

26. Different blood vessels have different characteristics. Indicate whether the following characteristics are describing veins, arteries or capillaries.

- a. Transport blood from the heart to the body. **arteries**
- b. Are smaller than hair. **capillaries**
- c. Have valves. **veins**
- d. Have elastic walls to resist high blood pressure. **arteries**
- e. Where exchanges occur between cells and blood. **capillaries**
- f. Transport blood from the body to the heart. **veins**
- g. Red blood cells travel very slow, in single file **capillaries**
- h. Transport blood towards the atria. **veins**
- i. Have a very thin wall. **capillaries**

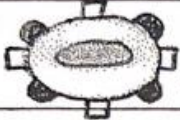







27. Complete the following schema of the different blood vessels taken by the blood to go through the body.



28. Who am I?

- a) Blood vessels bringing blood to the lungs. Pulmonary arteries
- b) Heart chamber from which the blood is expelled in the arteries. ventricles
- c) Heart chambers receiving blood from the veins. atria
- d) Blood vessel receiving blood from the left ventricle. aorta
- e) Blood vessels bringing blood to the right atrium. Vena cava
- f) Blood vessels bringing oxygenated blood to the heart. Pulmonary veins

29. Complete the following table. Write the blood types, the antigens present on the surface of the red blood cells and the antibodies present in the blood.

	Blood types	Antigens present on red blood cells	Antibodies present in the blood
D Rh	 A <sup>+</sup>	A + Rh	B
B	 A <sup>-</sup>	A	Rh + B
	 B <sup>+</sup>	B + Rh	A
	 B <sup>-</sup>	B	Rh + A
	 AB <sup>+</sup>	A B Rh	X
	 AB <sup>-</sup>	A B	Rh
	 O <sup>+</sup>	Rh	A + B
	 O <sup>-</sup>	X	A B Rh

30. The active ingredient in aspirin is acetylsalicylic acid. This substance is known to reduce pain and fever. It also acts on platelets and reduces their efficacy to coagulate blood. Why do you think it is requested that patients do not take aspirin before surgery?

Because it reduces the function of platelets, if there is a bleeding issue during the surgery, the body would not be able to clot and because there are not enough platelets.