ANS key

Blood Compatibility Worksheet

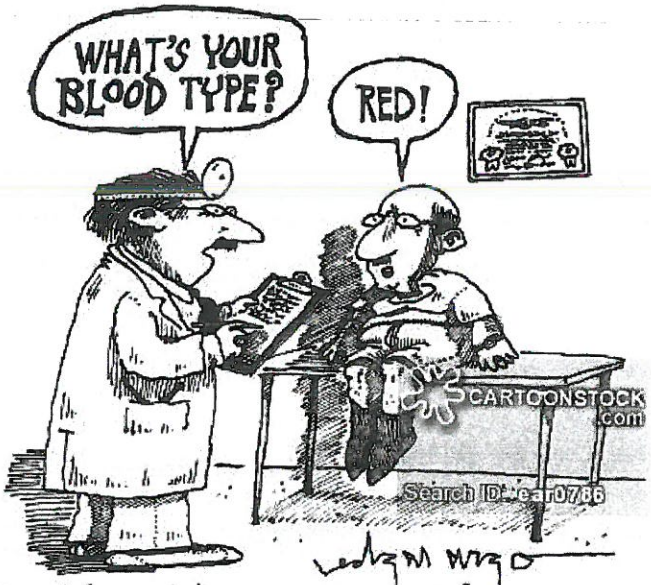
1. **Define** an antigen.

protein on the surface of the RBC

2. **Define** an antibody.

a substance produced by WBCs to fight off foreign invaders

3. **Explain** what happens in agglutination. Why can it be deadly?



The blood will clump inside the blood vessels and this leads to blockages (blood clots that are deadly).

4. **Draw** a blood cell to represent someone who has AB- blood type.

Use your drawing to answer the following questions:

a. **List** the antigen(s) present on the surface of a red blood cell.

antigen A & B

b. **Name** the antibodies this person will produce.

Anti-Rh

c. **List** the blood types this person can donate (give) to.

AB^-, AB^+

d. **List** the blood types this person can receive from.

A^-, O^-, B^-, AB^-

5. **Circle** Genevieve's blood type if she can receive O^- blood and A^- blood. She can also donate her blood to individuals of types A^-, A^+, and AB^+.

A) O^- B) A^- C) A^+ D) AB^-

6. Following a bad accident, Paul lost a considerable amount of blood. At the hospital, the doctor decided Paul need a blood transfusion. If Paul is B Rh^-, **identify and circle** the transfusion(s) that will not cause agglutination (clumping).

i) Donor is AB Rh^- ii) Donor is O Rh^-

iii) Donor is B Rh^+ iv) Donor is A Rh^-

7. **Explain** why blood type O^- is considered to be the universal donor.

There are no antigens on the surface of its RBCs. Therefore if O^- blood is transfused (donated) the receiver (patient) will not produce any antibodies to attack.

8. **Explain** why AB^+ is considered to be the universal receiver.

A person with AB^+ will have all of the antinogens of the surface of its RBCs. Therefore, this person will not produce any antibodies to attack.