

A&P 102 MIDTERM EXAM IVY TECH 2 LATEST VERSIONS (VERSION A AND B) 2023-2024 ACTUAL EXAM 300 QUESTIONS AND CORRECT DETAILED ANSWERS WITH RATIONALES|ALREADY GRADED A+

VERSION A

How is the shape of a red blood cell important to its function? -

ANSWER- It allows them to squeeze through vessel walls and transport oxygen to tissues

Why might blood volume differ from one person to the next? -

ANSWER- It might differ depending on a person's health and age, and women tend to have lower blood volume due to their menstrual cycle.

What is hematocrit? - ANSWER- the ratio of the volume of red blood cells to the total volume of blood

learnexams

Neutrophils - ANSWER- Most abundant WBC; 54-62%. Phagocytic and tend to self-destruct as they destroy foreign invaders, limiting their life span to a few days.

Eosinophils - ANSWER- Deep red granules in acid stain, bi-lobed nucleus, 1-3% of WBC

Basophils - ANSWER- release histamine and heparin, <1% of WBC

Monocytes - ANSWER- Largest of all blood cells, kidney or oval shaped nuclei, become macrophages, 3-9% of WBC

Lymphocytes - ANSWER- Slightly larger than RBC, 25-33% WBC

Compare serum versus plasma - ANSWER- Plasma is the liquid part of blood, in which blood cells, nutrients and hormones float.

Serum is the fluid part of blood, without the clotting factors or blood cells.

Describe the steps in clot formation - ANSWER- Hemostasis - the stoppage of bleeding.

1. Blood vessel spasm - smooth muscle in blood vessel contracts
2. Platelet plug formation:
 - a. break in vessel wall
 - b. blood escapes through break
 - c. platelets adhere to each other, to end of broken vessel, and to exposed collagen
 - d. platelet plug helps control blood loss
3. Blood coagulation - clot forms (occurs extrinsically or intrinsically).

What happens if clots form within blood vessels? - ANSWER- A thrombus is made. If it breaks loose of the vessel wall and begins circulating through the body, it is then called an embolus, which can travel into tighter vessels and get trapped, causing death.

What is edema? - ANSWER- **Abnormal accumulation of fluid in the interstitial spaces, causing swelling of the tissues**

What antigens can be found on RBC? - ANSWER- **Antigens A, B, AB, or none.**

What antibodies can be found in the plasma? - ANSWER- **Antibodies A, B, AB, or none.**

Type A - ANSWER- **Contains A antigens on cell surface and anti-B antibodies in plasma**

Type B - ANSWER- **Contains B antigens on cell surface and anti-A antibodies in plasma**

Type AB - ANSWER- **Contains both A and B antigens on cell surface and no antibodies in plasma**

Type O - ANSWER- **Contains no antigens on cell surface and has both anti-A and anti-B antibodies in plasma (universal donor)**

Type A can give to - ANSWER- **Either Type A or Type AB**

Type A can receive from - ANSWER- **Either Type A or Type O**

Type B can give to - ANSWER- **Either Type B or Type AB**

Type B can receive from - ANSWER- **Either Type B or Type O**

Type AB can give to - ANSWER- **only AB**

Type AB can receive from - ANSWER- **A, B, AB, O**

Type O can give to - ANSWER- **A, B, AB, O**

Type O can receive from - ANSWER- **only O**

How does the Rh factor affect a developing fetus and its mother? -
ANSWER- **Rh positive - presence of antigen D or other Rh antigens on the RBC membranes.**

Rh negative - lack of these antigens

If a mother is Rh negative and her baby is Rh positive, her antibodies form to fight Rh-positive blood cells. If a mother is Rh positive and her baby is Rh positive, her antibodies attack the baby's RBC.

Complications can lead the baby to develop erythroblastosis fetalis or hemolytic disease.