

## The Haematic System

Blood is a specialised biological fluid (technically a ..... ) consisting of red blood cells (also called RBCs or ..... ), white blood cells (also referred to as ..... ) and ..... (or thrombocytes) placed in a complex medium known as blood ....., which is the liquid component of blood. It makes ..... about 55 per cent of the total blood ....., is colourless or yellowish in colour and contains the plasma ..... (albumins, globulins, and fibrinogen), gases, nutrients, salts, hormones and excretory products. A product of plasma which does not contain fibrinogen is referred to as ..... RBCs are disc-like structures, ..... on both sides. The main function of leukocytes is to protect the body ..... invasion of bacteria and they are classified into two groups: ..... and .....

The most numerous cells in the blood are red blood cells. They contain ..... which, when oxygenated, gives blood its red colour. Its iron-containing part provides the transport of oxygen and carbon dioxide. White blood cells help resist infections, and platelets are important in the ..... of blood, also called blood clotting. Blood circulates round the body via blood ..... by the pumping action of the heart. Medical terms related to blood often begin with *haemo-* or *haemato-* (US: *hemo-* and *hemato-*), from the Greek word *haima* for blood. Anatomically, blood is considered a ..... tissue for both its origin in the bones and its function.

Blood accounts for seven per cent of the human body ....., with an average density of approximately  $1060 \text{ kg/m}^3$ , very close to pure water's density of  $1000 \text{ kg/m}^3$ . The average adult has a blood volume of about ..... litres.

Red blood cells are produced in the red .....; this process is referred to as ..... Some bones that contain blood producing marrow may cease to fulfil this function over time. During childhood, almost every human bone produces red blood cells; in adults, red blood cell production tends to limit itself to the vertebrae, breastbone, rib cage, pelvis and parts of upper and lower extremities.

Human blood is divided into four groups: A, B, AB, O, according to the type of ..... on the surface of red blood cells. Blood ..... is a process of voluntarily giving blood for storage in a blood ....., generally for subsequent use in blood transfusions.

**erythrocytes plasma four erythropoiesis concave leukocytes bank up  
vessels haemoglobin connective donation blood serum tissue platelets  
bone marrow against granulocytes agranulocytes antigens coagulation  
weight proteins volume**

## The Lymphatic System

1. What are the individual parts of the lymphatic system?
2. Which organ is the filter for lymph?
3. Which part of the body serves as the storehouse for the cellular debris collected by the lymphatic system?
4. Which organ protects the body from infections at the entrance to the digestive and respiratory tracts?