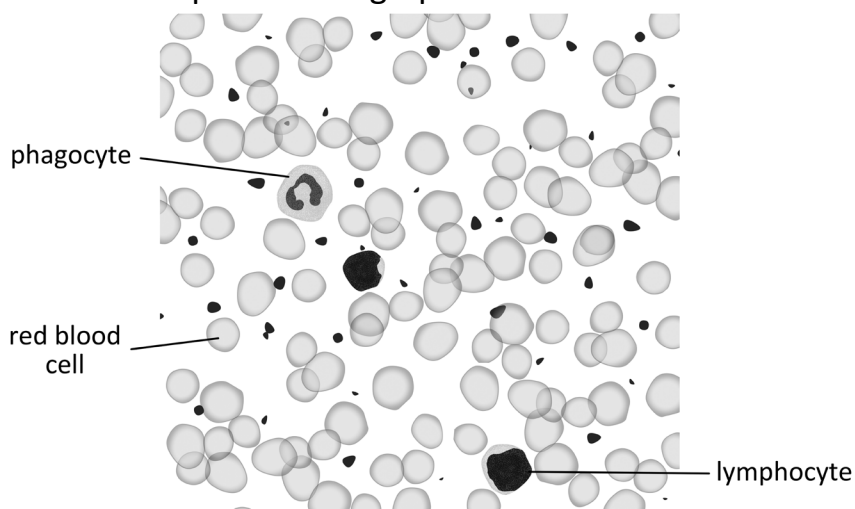


Name:

Class:



The figure below shows a photomicrograph of human blood.



Describe the differences in appearance and the functions of the three cells labelled in the figure above.

Red blood cell

Appearance: Biconcave shape and has no nucleus.

Red blood cells smaller than (named) white blood cell(s).

Function: Transports oxygen.

Lymphocyte

Appearance: Little cytoplasm or large nucleus or nucleus fills most of the cell.

Function: Produces antibodies OR responds to antigen(s) or vaccine(s). Reference to memory cells.

Phagocyte

Appearance: Lobed / irregular-shaped / C-shaped / nucleus.

Function: Engulf pathogens / phagocytosis.

The name the hormone that stimulates the maturation of follicles in the ovary.

Follicle stimulating hormone

Ovulation during pregnancy is prevented by high levels of what hormone?

Progesterone

State the name given to a build-up of nitrates in bodies of water.

Eutrophication

Name **one** type of bacteria that reduce the nitrate content of soil.

Denitrifying bacteria

A person has a cardiac output of 5.6 litres per minute. The stroke volume of each heart beat is 80 ml. Calculate the heart rate.

$$\text{Heart rate} = 5.6 \div 0.08 = 70 \text{ beats per minute}$$