

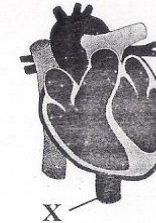
MODERN COLLEGE

SUCCESS DEPENDS ON THE PROPER USE OF TIME

Circulatory system

1. Which component of blood carries oxygen to all body cells?
A. Lymphocytes B. Phagocytes C. Red blood cells D. Platelets
2. Which part of the circulatory system helps to clot blood when a person gets a cut?
A. Red blood cells B. Platelets C. White blood cells D. Antibodies
3. The fluid part of blood is called.....
A. tissue fluid B. serum C. lymph D. plasma
4. One of the functions of the circulatory/transport system in Man is
A. to break down food so that it can be used by the body
B. to distribute food nutrients throughout the body
C. to give the body shape and support
D. to produce enzymes to digest food
5. The tiny blood vessels where exchange of oxygen and nutrients takes place are called
A. veins B. arteries C. arterioles D. capillaries
6. These cells help to fight diseases and infections:
A. Red blood cells B. White blood cells C. Platelets D. Cheek cells
7. Large blood vessels that take blood from the heart to other body parts are called
A. veins B. arteries C. venules D. capillaries
8. Which statement about veins is not true?
A. they return blood from various body parts to the heart
B. they contain valves
C. they all carry deoxygenated blood
D. they have relatively thin wall
9. Deoxygenated blood carried in the vena cava empties into the _____ of the heart.
A. right atrium B. right ventricle C. left atrium D. left ventricle

10. Identify the blood vessel X in the diagram of the heart.



- A. Vena cava B. pulmonary artery C. pulmonary vein D. aorta
11. Which type of blood vessel has thick wall in order to withstand high pressure?
A. vein B. artery C. venule D. capillary
 12. What is the correct sequence for blood being pumped from the heart to the lungs?
A. left atrium → left ventricle → pulmonary artery
B. left atrium → left ventricle → pulmonary vein
C. right atrium → right ventricle → pulmonary artery
D. right atrium → right ventricle → pulmonary vein
 13. What part of the blood carries minerals, vitamins, sugar, and other foods to the body's cells?
A. plasma B. platelets C. red blood cells D. white blood cells
 14. Which of the following contains oxygenated blood?
A. right atrium B. pulmonary artery
C. pulmonary vein D. right ventricle
 15. The main function of the valves in the heart is to
A. prevent back-flow of blood.
B. divide the heart into four chambers.
C. control the volume of blood leaving the heart.
D. control the volume of blood entering the heart.
 16. The blood vessel that carries blood from the heart to the lungs is the
A. coronary vein. B. coronary artery.
C. pulmonary vein. D. pulmonary artery.
 17. Which one of the following is NOT part of the human circulatory system?
A. heart B. blood vessel C. skull D. blood
 18. Which component of blood produces antibodies that destroy bacteria?
A. Red blood cells B. Phagocytes C. Lymphocytes D. Platelets

1. Fig. 1 below shows the components of blood as seen under a light microscope.

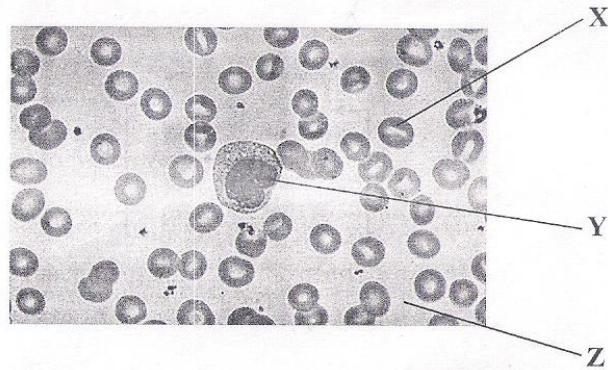


Fig. 1

- a. Name the blood components labelled X, Y and Z in Fig. 1.

.....

- b. State one function for each of the components X, Y and Z.

X:

Y:

Z:

- c. Identify and name one other blood component shown in Fig. 1.

.....

- d. Give two differences between cell X and cell Y.

.....

.....

2. Fig. 5 shows some blood cells.

- a. Use labelled arrows, A, B and C, to identify 3 different types of cells in Fig. 5.

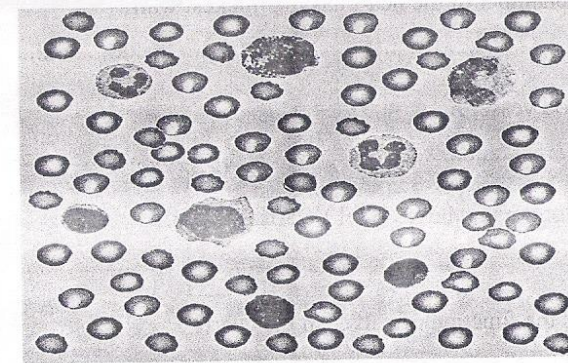


Fig. 5

- b. Give the name of each of the labelled cells A, B and C, identified on Fig. 5.

A:

B:

C:

- c. State the function of each of the cells A, B and C.

A:

B:

C:

- a. Tabulate 3 differences between the structure of an artery compared to that of a vein.

Artery	Vein
.....
.....
.....

3. State the function of (i) arteries, (ii) veins, (iii) blood capillaries.

Arteries:

Veins:

Capillaries:

State the main function of each of the following components of blood.

- a. a red blood cell

.....

- b. a lymphocyte

.....

- c. a platelet

.....

- d. a phagocyte

.....

- e. plasma

.....

Match the statements in column A with those in column B.

	Column A	Column B
(i)	bursting of blood capillaries in the brain	coronary heart disease
(ii)	thickest muscular wall	diastole
(iii)	diet rich in cholesterol	stroke
(iv)	relaxation of heart chambers	left ventricle
(v)	produce antibodies	capillaries
(vi)	very closely associated with body cells	lymphocytes

4. a. Name the blood vessel which carries oxygenated blood to the heart muscles?

.....

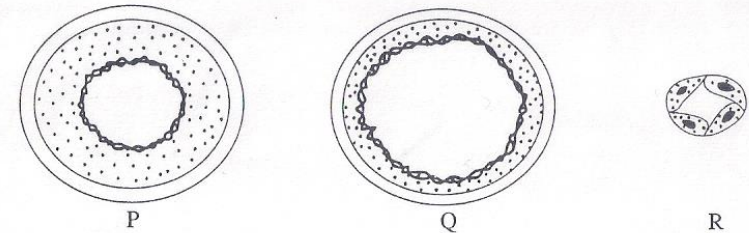
- b. How does eating excess animal fat affect the functioning of this blood vessel?

.....

- c. State two other conditions that may contribute to the condition described in (b).

.....

The diagram below shows cross-sections of the three types of blood vessels.



- (i) Identify the blood vessels P, Q & R.

P:

Q:

R:

- (ii) Which of them

1. carries blood under high pressure

.....

2. has valves

.....

3. allows exchange of materials between blood and body cells

.....

1. Match each term in Column A with its function in Column B.

Column A		Column B
Blood		carry blood away from the heart
Heart		pumps blood
Arteries		connect arteries and veins
Veins		transports materials in the body
Capillaries		carry blood back to the heart

2. Read carefully and state whether each statement is **true** or **false**.

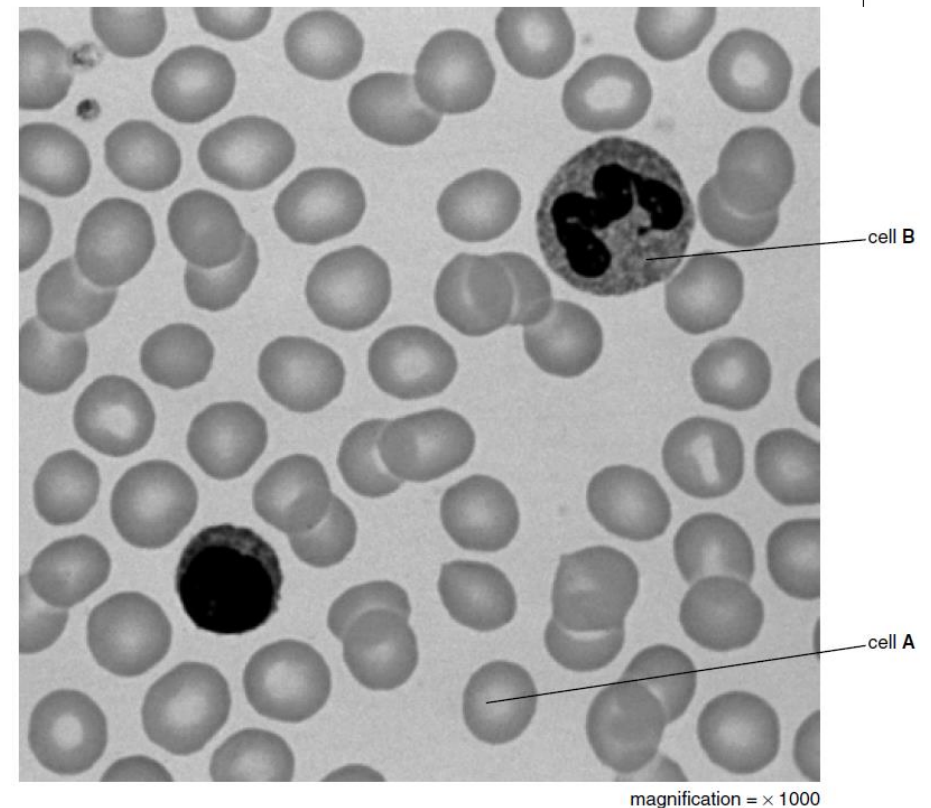
- Blood is a red liquid which flows in blood vessels. _____
- Blood is made of plasma and cells only. _____
- Blood plasma represents about 45 % of the blood. _____
- The solid components of blood comprise red blood cells and platelets only. _____
- Red blood cells are more numerous than white blood cells in the human blood. _____
- There is a large central nucleus in mature red blood cells. _____
- Haemoglobin carries oxygen in red blood cells. _____
- White blood cells recognise germs and kill them. _____
- Antibodies are produced by red blood cells to kill germs. _____
- Platelets help in blood clotting. _____

3. Fill each blank with the appropriate term given below.

heart, arteries, veins, nutrients, carbon dioxide, capillaries, high, away, pumps

- Veins carry blood _____ from other organs back to the heart.
- Blood flows under _____ pressure in arteries.
- _____ leaves blood in capillaries to enter cells of adjacent tissues.
- The _____, blood vessels and blood make up the blood circulatory system.
- Blood vessels that carry blood away from the heart are called _____.
- The blood flowing in veins is rich in _____.
- Blood moves from arteries to veins through tiny blood vessels known as _____.
- Heart _____ blood throughout the body.
- Arteries branch off to form network of _____.
- Blood flows away from the heart in _____.

3 Fig. 3.1 shows some cells seen under a microscope.



(a) (i) Name the tissue from which the cells come.

[1]

(ii) Name cell A.

[1]

(iii) Explain why cell A looks darker at the edges than in the middle.

[2]

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(iv) Explain how the structure of cell **A** is adapted for its function.

[2]

(b) (i) make a large, labelled drawing of cell **B**.

[4]

Magnification [3]

[Total : 13]

(ii) Measure across the widest part of cell **B** in Fig. 3.1.

*Width of cell **B***

.....

Measure across the same part of your drawing in **(b)(i)**.

Width of drawing

.....

Calculate the magnification of your drawing compared to the actual size of cell **B** on the slide that was photographed to make Fig. 3.1, using these measurements.

Show your working clearly.