

## Chapter 2

1. The circulatory system is made up of the (1)\_\_\_\_\_ and the blood vessels. The heart is a (2)\_\_\_\_\_ organ that (3)\_\_\_\_\_ blood around the body.
2. The three main types of blood vessels are arteries, veins and (4)\_\_\_\_\_. Blood is carried away from the heart in (5)\_\_\_\_\_ and back to the heart in (6)\_\_\_\_\_. Capillaries are tiny blood vessels found in body tissues. They form a (7)\_\_\_\_\_ allowing blood to flow from arteries to veins.
3. Blood carries (8)\_\_\_\_\_, oxygen, (9)\_\_\_\_\_ and waste round the body. Capillaries are thin-walled and therefore allow nutrients and (10)\_\_\_\_\_ in the blood out to the tissues and carbon dioxide and (11)\_\_\_\_\_ to pass from the tissues into the blood.
4. Each time the heart beats, it pushes blood into the arteries making them swell. This movement is called (12)\_\_\_\_\_. It can be measured using high-tech instruments such as a (13)\_\_\_\_\_ or a heart rate monitor or low-tech instruments such as a stethoscope and a (14)\_\_\_\_\_.

5. A person's pulse rate depends on several factors such as their size, (15)\_\_\_\_\_, (16)\_\_\_\_\_ and level of fitness. A high resting pulse rate may lead to heart (17)\_\_\_\_\_.
6. The time taken for pulse rate to return to normal after exercise is called (18)\_\_\_\_\_ time. A combination of (19)\_\_\_\_\_ resting pulse rate and (20)\_\_\_\_\_ recovery time may indicate high level of fitness. Resting pulse rate and recovery time can be reduced by (21)\_\_\_\_\_ regularly.
7. Blood that has been pumped into arteries is under pressure. This blood (22)\_\_\_\_\_ can be measured using low-tech instruments called (23)\_\_\_\_\_ and mercury (24)\_\_\_\_\_ or a high-tech instrument called a (25)\_\_\_\_\_ sphygmomanometer. A normal average upper value for blood pressure would be 120 and a lower value would be 80 (written as 120/80 for short). Readings over 160/90 indicate (26)\_\_\_\_\_ blood pressure.
8. High blood pressure can be caused by : being (27)\_\_\_\_\_, not taking enough exercise, eating a diet containing too much (28)\_\_\_\_\_ or salt or drinking alcohol to (29)\_\_\_\_\_. High blood pressure can lead to (30)\_\_\_\_\_, heart attacks and (31)\_\_\_\_\_. Low blood pressure can indicate heart (32)\_\_\_\_\_.

9. Blood can be tested to detect several medical conditions. Infection is indicated by the presence of (33)\_\_\_\_\_. (34)\_\_\_\_\_ is indicated by a low iron content, diabetes by a high level of (35)\_\_\_\_\_ and (36)\_\_\_\_\_ by an abnormally high white blood cell count.
10. Before being used for a blood transfusion, blood has to be tested to find out its blood (37)\_\_\_\_\_ since some blood groups clump in the presence of others instead of mixing freely. Blood is also tested for (38)\_\_\_\_\_ concentration in cases of suspected drunk driving.

age alcohol Anaemia angina antibodies arteries  
capillaries digital disease excess exercising failure fat  
group heart high leukaemia link low manometer muscular  
nutrients overweight oxygen pressure pulse pulsometer  
pumps recovery sex short stethoscope stopwatch strokes  
sugar sugar veins wastes

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## Chapter 2 (Answers)

1. The circulatory system is made up of the heart and the blood vessels. The heart is a muscular organ that pumps blood around the body.
2. The three main types of blood vessels are arteries, veins and capillaries. Blood is carried away from the heart in arteries and back to the heart in veins. Capillaries are tiny blood vessels found in body tissues. They form a link allowing blood to flow from arteries to veins.
3. Blood carries sugar, oxygen, nutrients and waste round the body. Capillaries are thin-walled and therefore allow nutrients and oxygen in the blood out to the tissues and carbon dioxide and wastes to pass from the tissues into the blood.
4. Each time the heart beats, it pushes blood into the arteries making them swell. This movement is called pulse. It can be measured using high-tech instruments such as a pulsometer or a heart rate monitor or low-tech instruments such as a stethoscope and a stopwatch.
5. A person's pulse rate depends on several factors such as their size, sex, age and level of fitness. A high resting pulse rate may lead to heart disease.
6. The time taken for pulse rate to return to normal after exercise is called recovery time. A combination of low resting pulse rate and short recovery time may indicate high level of fitness. Resting pulse rate and recovery time can be reduced by exercising regularly.
7. Blood that has been pumped into arteries is under pressure. This blood pressure can be measured using low-tech instruments called stethoscope and mercury manometer or a high-tech instrument called a digital sphygmomanometer. A normal average upper value for blood pressure would be 120 and a lower value would be 80 (written as 120/80 for short). Readings over 160/90 indicate high blood pressure.

8. High blood pressure can be caused by : being **overweight**, not taking enough exercise, eating a diet containing too much **fat** or salt or drinking alcohol to **excess**. High blood pressure can lead to **angina**, heart attacks and **strokes**. Low blood pressure can indicate heart **failure**.
9. Blood can be tested to detect several medical conditions. Infection is indicated by the presence of **antibodies**. **Anaemia** is indicated by a low iron content, diabetes by a high level of **sugar** and **leukaemia** by an abnormally high white blood cell count.
10. Before being used for a blood transfusion, blood has to be tested to find out its blood **group** since some blood groups clump in the presence of others instead of mixing freely. Blood is also tested for **alcohol** concentration in cases of suspected drunk driving.