

## Life process

### Short answer questions

Write any two differences between red blood cells and white blood cells?

**Two differences between Red Blood Cells (RBC) and White Blood Cells (WBC)**

RBC carry oxygen; WBC fight against infection.

RBC have haemoglobin and no nucleus; WBC have nucleus but no haemoglobin.

Write any two functions of blood related to transportation.

**Two transportation functions of blood are:**

- Transports oxygen and nutrients to body cells.
- It carries carbon dioxide and waste products to excretory organ

Write any two differences between atrium and ventricle of the heart.

**Two differences between Atrium and Ventricle:**

Atrium receives blood; ventricle pumps blood out of heart.

Atrium has thin wall; ventricle has thick muscular wall.

Write any two characteristics of plasma.

**Two characteristics of Plasma**

Straw-coloured liquid part of blood.

It contains water, proteins, hormones and nutrients.

**Write any four causative factors of heart attack.**

**Four causative factors of Heart Attack**

- Smoking
- High blood pressure
- High cholesterol
- Obesity / lack of exercise

**Write any two difference between white blood cells and thrombocytes.**

**Two differences between WBC and Thrombocytes (Platelets)**

WBC fight infection; platelets help in blood clotting.

WBC are larger cells; platelets are small cell fragments.

**Write any two differences between pulmonary artery and pulmonary vein.**

**Two differences between Pulmonary Artery and Pulmonary Vein**

Pulmonary artery carries deoxygenated blood; pulmonary vein carries oxygenated blood.

Pulmonary artery goes from heart to lungs; pulmonary vein comes from lungs to heart.

**Write down preventive measures of heart attack.**

**Preventive measures of Heart Attack**

- Avoid smoking and alcohol.
- Regular exercise and balanced diet.
- Control blood pressure and cholesterol.
- Maintain healthy weight.

**Write any two differences between artery and vein.**

**Two differences between Artery and Vein**

Artery carries blood away from heart; vein carries blood toward heart.

Artery has thick elastic wall; vein has thin wall with valves.

**Write down the method of feeling heartbeat.**

**Method of feeling Heartbeat is:**

Place fingers on wrist or chest and count the pulse beats per minute.

**Write any four causative factors of high blood pressure.**

**Four causative factors of High Blood Pressure**

- Excess salt intake
- Stress
- Obesity
- Lack of physical activity

**Write any four symptoms of diabetes.**

- **Four symptoms of Diabetes**
- Frequent urination
- Excess thirst
- Weight loss
- Fatigue

**Valves are present in veins but not in arteries, Why?**

**It is because** Valves are present in veins to prevent backflow because blood pressure is low, whereas arteries carry blood at high pressure so valves are not needed.

**Write any two differences between Systemic circulation and Pulmonary circulation.**

**Systemic Circulation**

Systemic circulation carries blood from the heart to the whole body and back to the heart, and it supplies oxygenated blood to body tissues.

Systemic circulation mainly transports oxygen and nutrients to body organs.

**Pulmonary Circulation**

Pulmonary circulation carries blood from the heart to the lungs and back to the heart, and it helps in oxygenation of blood in the lungs.

Pulmonary circulation mainly exchanges carbon dioxide with oxygen in the lungs.

**Name the valves present between auricles and ventricles of human heart. Also write their function.**

The tricuspid valve is present between the right auricle and right ventricle, and the bicuspid (mitral) valve is present between the left auricle and left ventricle; their function is to prevent the backflow of blood into the atria during ventricular contraction.

**Write any two preventive measures of high blood pressure.**

**Two preventive measures of High Blood Pressure**

- Reduce salt intake.
- Regular physical exercise.

**Write any two effects of increasing uric acid in human body.**

**Two effects of Increasing Uric Acid**

- Joint pain (gout).
- Kidney stone formation.

**Write down any two methods of decreasing uric acid.**

**Two methods of Decreasing Uric Acid**

- Drink plenty of water.
- Avoid high-protein and purine-rich foods.

**Write down two major functions of blood circulation in human body.**

**Two major functions of Blood Circulation**

Supplies oxygen and nutrients to cells.

Removes carbon dioxide and metabolic wastes.