

Transportation in plants and circulation in animals

Points to Remember

- ❖ The movement of molecules from a region of higher concentration to a region of their lower concentration without the utilization of energy is called diffusion.
- ❖ Osmosis is the movement of solvent or water molecules from the region of higher concentration to the region of lower concentration through a semi-permeable membrane.
- ❖ Transpiration is the evaporation of water in plants through stomata in the leaves.
- ❖ The circulatory system consists of the circulating fluids, the blood and lymph and the heart and its blood vessels.
- ❖ The blood consists of two main components. The fluid plasma and the formed elements (blood cells) which are found suspended in the plasma.
- ❖ A muscular pumping organ that pumps out the blood into the blood vessels is called heart.
- ❖ The blood circulates in our body as oxygenated and deoxygenated blood.
- ❖ The supply of blood to the heart muscles (cardiac muscles) is called as coronary circulation.
- ❖ One complete contraction (systole) and relaxation (diastole) of atrium and ventricles of heart is called a heartbeat.
- ❖ The sequence of events which occur during the beginning and completion of one heart beat is called cardiac cycle.
- ❖ Blood pressure is usually expressed as systolic pressure and diastolic pressure (120mm / 80 mm Hg)
- ❖ An individual has one of the four blood groups A, B, AB and O.
- ❖ Rh factor was discovered by Landsteiner and Wiener in 1940.
- ❖ Lymph is a colourless fluid formed when plasma, proteins and blood cells escape into intercellular spaces in the tissues through the pores present in the walls of capillaries.



S.No	Artery	Vein
1	Distributing vessel	Collecting vessel
2	Pink in colour	Red in colour
3	Deep location	Superficial in location
4	Blood flow with high pressure	Blood flow with low pressure
5	Wall of artery is strong, thick and elastic	Wall of vein is weak, thin and non-elastic
6	All arteries carry oxygenated blood except pulmonary arteries	All veins carry deoxygenated blood except pulmonary veins
7	Internal valves are absent	Internal valves are present