

Transport System

- ◆ Transport system present in the bodies are essential to keep the cells alive and healthy.
- ◆ Transport system consists of heart, blood vessels and blood.

1. What is the need of Transport System?

Transport System - Functions:

1. It helps in transport of O_2 from lungs to various parts of the body.
2. It requires to transport digested food from small intestine to various parts of the body.
3. It requires to transport of nutrients to various parts of the body.
4. It helps in the collection of CO_2 from various parts of the body to lungs and then it is expelled out.
5. It helps in transport of hormones from different endocrine glands to various parts of the body.

2. How many types of circulatory system are there? give example?

- ◆ Circulatory systems are of two types. They are
 1. Open type circulation
 2. Closed type circulation
- ◆ Open type circulation consist of heart, blood sinuses and blood.
Eg: Insects
- ◆ Closed type circulation consist of heart, blood vessels and blood.
- ◆ The main difference between open type and closed type circulation is blood vessels. Blood vessels are present in closed type circulation.
- ◆ Blood vessels are absent in open type circulation.

3. Explain the Transport System in Amphibians or Frog? (V.V.Imp)

Circulatory system in Frog:

- ◆ Circulatory system of Frog consists of heart, blood vessels and blood. Hence it comes under closed type circulation.
- ◆ Frog's heart consists of '3' chambers. They are two auricles and 'one' ventricle.
- ◆ Auricle (left and right) are present side by side and are separated with inter auricular septum.
- ◆ Behind the auricles a chamber is present called ventricle.

- ◆ In amphibians heart is associated with sac like structure called sinus venosus.

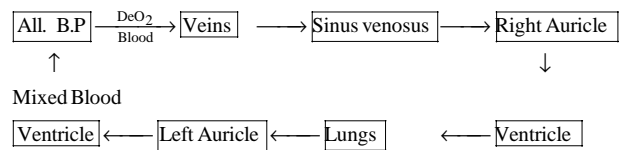
4. Write brief note on sinus venosus?

Sinus venosus:

It is a sac like structure formed by union of caval veins. It is a centre for collecting deoxygenated blood. It opens into right auricle.

- ◆ Sinus venosus is present in pisces (fish) amphibians, and reptiles and it is absent in "Aves and mammals".

◆ Process of circulation:



- ◆ Deoxygenated (DeO_2) blood collected from all the body (All B.P) parts and send to sinus venosus, from sinus venosus blood goes to right auricle; from here blood goes to ventricle and it goes to lungs through pulmonary arteries. In lung blood gets oxygenated and send to left auricle, from here oxygenated blood goes to ventricle. In ventricle blood gets mixed (pure blood + impure blood) and sent to various part of the body.

5. What is double circuit circulation? Give Examples: (V.V.Imp)

Double circuit circulation:

- ◆ The blood passes through the heart twice in a circulation is called double circuit circulation. (1. Heart - Lungs 2. Heart - Body parts)
Eg: Amphibians, Reptiles, Aves and Mammals.

6. What is single circuit circulation? Give Examples?

Single circuit circulation:

- ◆ The blood passes through the heart only once in a circulation is called single circuit circulation.
Eg: Fish

7. What is pulmonary heart? Give Examples?

- ◆ **Pulmonary heart:** The heart pumps blood to the lungs for purification is called pulmonary heart.
Eg: Amphibians - Mammals

8. What is Branchial Heart? Give Examples.

- ◆ **Branchial Heart:** The heart pumps blood to the

gills for purification is called Branchial heart.

Eg: Fish

CIRCULATORY SYSTEM IN MAN

1. Write short note on pericardium?

Pericardium:

- ◆ Heart is enclosed in a double thin transparent sac like structure called pericardium. The space present between two membranes is called pericardial space which is filled with pericardial fluid.
- ◆ Pericardium and pericardial fluid protect the heart from physical shocks or blows.

2. Give an account of valves present in human heart?

◆ **Valves present in the human heart:**

There are four types of valves present in human heart. They are

1. Tricuspid valves
2. Bicuspid valves
3. Pulmonary valves
4. Aortic valves

- ◆ **Tricuspid valves:** It is present between right auricle and right ventricle, and it allows blood from right auricle to right ventricle. It has three flaps or cups.
- ◆ **Bicuspid valve:** It is present between left auricle and left ventricle. It allows blood from left auricle to left ventricle. It has two flaps.
- ◆ **Pulmonary valves:** It is present at the origin of pulmonary aorta in the right ventricle. It has 3 half moon shaped or semilunar valves.
- ◆ **Aortic valves:** It is present at the origin of aorta in the left ventricle. It allows blood to flow from left ventricle into the aorta.

3. What is B.P or hypertension? What are the causes and write preventive measures?

Hypertension or high blood pressure or High B.P:

- ◆ The pressure with which the blood flows in the blood vessels is called blood pressure.
- ◆ The normal blood pressure is 120/80. The numerator- '120' is called systolic pressure. The denominator- '80' is called diastolic pressure.
- ◆ If B.P is more than 120/80 is called high B.P or hypertension.
- ◆ **Causes for B.P:**

1. Increasing the levels of cholesterol in the blood.
2. Constant stress and strain for a long time.
3. Improper functions of kidneys.
4. Smoking and consumption of alcohol.

Preventive measures:

1. Diet control.
2. Avoid stress and strain.
3. Avoid consumption of alcohol and smoking.
4. Doing regular moderate exercises.
5. Taking appropriate medicines.

Fill up the blanks:

1. Blood vessels are absent in _____ circulatory system.
2. Example for open type circulatory system is _____
3. Sinus venosus is absent in _____
4. Incompletely divided ventricle is found in _____ animals.
5. In man caval veins opens into _____
6. Bicuspid valve is also known as _____
7. Pulmonary circuit is present between _____ and _____
8. Systemic aorta carries _____ blood.
9. Superior venacava is also known as _____
10. Pericardium is associated with _____

KEY

1. Open type
2. Insects
3. Aves and Mammals
4. Reptile
5. Right Auricle
6. Mitral valve
7. Heart and Lungs, Lungs to Heart
8. Oxygenated
9. Pre caval vein
10. Heart