QUESTIONS : IN BOX

1. What are the components of the transport system in human beings ? What are the functions.

A :) The transport system in human beings mainly consists of heart , blood and blood vessels.

(i) Function of heart - The heart receives deoxygenated blood from body parts and pumps it to lungs for enriching with oxy . It receives purified blood from lungs and pumps around the body.

(ii) Function of blood - Blood transport oxy, carbon dioxide , digested food , hormones and nitrogenous waste like urea . It also protect the body from diseases.

(iii) Function of blood vessels - The blood pushed by heart flows through blood vessels.

Q Why is it necessary to separate oxygenated and deoxygenated in mammals and birds?

A) Separation of oxygenated and deoxygenated blood allows good supplies of oxy to the blood. This system is useful in animals that have high energy requirement. Mammals and birds constantly need oxy to get energy to maintain their body temp constant.

3 What are the components of transport system in highly organised plants.

A) Transport system in highly organised plants consist of two main components - xylem and phloem.

(1) <u>Xylem</u> - It is responsible for transport of water and minerals and its component

are xylem vessels, xylem tracheids, xylem parenchyma and xylem tracheids, xylem parenchyma and xylem fibres.

4. How are water and minerals transport in plants?

A:) The upward movement of water and mineral salts from roots to the aerial parts of plant eg. leaves, shoots, flowers etc against gravitational force occurs through process of ascent of sap In xylem fibre or tissue, vessels and tracheids of roots stems and leaves are interconnected to form a continuous stems of water conducting channel reaching all parts of the plant. The water, along with dissolve -d minerals from root hairs passing into xylem vessels through cells and water is carried to all parts of plant.

5 How food is transported in plants?

A) Food molecules are synthesized in the green parts of plant from where it is transported to all parts of the plant through phloem Food from the area of its manufacture enters as a dilute aqueous solution The movement of nutrients may be in upward or downward direction.
Entry of nutrients into phloem increases the osmotic pressure, causing water to move into it due to endosmosis. The pressure moves the material into the phloem to tissues which have less pressure. In this way, according to plant's requirement, the nutrients get translocated.

EXERCISE : Q11

11. Describe double circulation in human beings.

A:) In our heart blood enters twice and also pumped out twice from the heart. The deoxygenated blood from the body is brought to right atrium through vena cava from where it is sent to right ventricle. The oxygenated blood from lungs again enters the left atrium of the heart through pulmonary vein.

From left atrium it is send to left ventricle to pump to diff parts of body.

In this way 'double circulation' is carried out.

Necessity - 'Double Circulation' is useful in case of humans for energy and body temp.