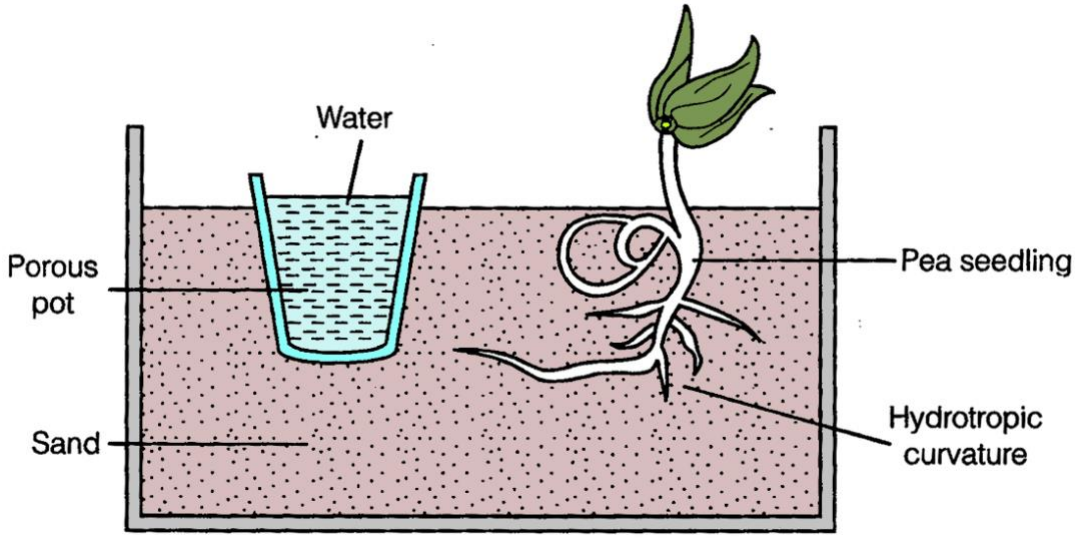

Questions Page number 125

1. How does chemical coordination take place in animals?

Solution:

Chemical coordination takes place in animals with the help of chemical messengers called as Hormones. Hormones are the chemic fluids that are secreted by endocrine glands of the endocrine gland. Hormones regulate the growth, development and homeostasis of the animals.

2. Why is the use of iodized salt advisable?

Solution:

Usage of iodized salt is advisable to avoid the deficiency of Iodine. If the intake of iodine is low, the release of thyroxine from the thyroid gland will be decreased. This affects fat, carbohydrate and protein metabolism

Thus a person may have goitre problem in case if the intake of iodine is lowered.

3. How does our body respond when adrenaline is secreted into the blood?

Solution:

Adrenaline hormone is secreted in large amounts when a person is frightened, or mentally disturbed. When it reaches the heart, it beats faster to supply more oxygen to our muscles. The breathing rate also increases because of the contractions of diaphragm and the rib muscles. It also raises the blood pressure, and allows more glucose to enter into the blood. All these responses together enable our body to deal with the emergency situations.

Adrenaline is a hormone secreted when a person is frightened or mentally disturbed. When Adrenaline reaches heart, heartbeat will increase to increase blood supply to our muscles. Adrenaline also increases the breathing rate because of contraction of diaphragm and the rib muscles. Adrenaline rush also increases blood pressure and allows entry of more glucose into blood. These altogether occurs when our body respond to secretion of adrenaline into our blood.

4. Why are some patients of diabetes treated by giving injections of insulin?

Solution:

Examples: Blinking of eyes, salivation	Examples: Beating of heart, blood circulation

11. Compare and contrast nervous and hormonal mechanisms for control and coordination in animals.

Solution:

	Nervous control		**Hormonal Control**
1	It is consist of nerve impulses between PNS, CNS and Brain.	1	It consists of endocrine system which secretes hormones directly into blood.
2	Here response time is very short.	2	Here response time is very long.
3	Nerve impulses are not specific in their action.	3	Each hormone has specific actions.
4	The flow of information is rapid.	4	The flow of information is very slow.

12. What is the difference between the manner in which movement takes place in a sensitive plant and the movement in our legs?

Solution:

Sl. No	**Movement in sensitive plants**		**Movement in our legs**
1	The movement in a sensitive plant is a response to stimulus (touch) which is an involuntary action.	1	Movement in our legs is a voluntary action.
2	No special tissue is there for the transfer of information	2	A complete system CNS and PNS is there for the information exchange.
3	Plant cells do not have specialized protein for movements.	3	Animal cells have specialized protein which help muscles to contract.

Frequently Asked Questions on Control and Coordination