

Science

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(Chapter 7)(Control and Coordination)

Class - 10

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Question 1:

How does chemical coordination take place in animals?

Answer 1:

Chemical coordination takes place in animals with the help of hormones. Hormone is the chemical messenger that regulates the physiological processes in living organisms. It is secreted by glands. The regulation of physiological processes and control and coordination by hormones comes under the endocrine system. The nervous system along with the endocrine system in our body controls and coordinates the physiological processes.

Question 2:

Why is the use of iodised salt advisable?

Answer 2:

Iodine stimulates the thyroid gland to produce thyroxin hormone. It regulates carbohydrate, fat, and protein metabolism in our body. Deficiency of this hormone results in the enlargement of the thyroid gland. This can lead to goitre, a disease characterized by swollen neck. Therefore, iodised salt is advised for normal functioning of the thyroid gland.

Question 3:

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

Answer 3:

Adrenalin is a hormone secreted by the adrenal glands in case of any danger or emergency or any kinds of stress. It is secreted directly into the blood and is transported to different parts of the body.

When secreted in large amounts, it speeds up the heartbeat and hence supplies more oxygen to the muscles. The breathing rate also increases due to contractions of diaphragm and rib muscles. It also increases the blood pressure. All these responses enable the body to deal with any stress or emergency.

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Question 4:

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

Answer 4:

Diabetes is a disease in which the level of sugar in the blood is too high. Insulin, a hormone secreted by the pancreas, helps in regulating the blood sugar levels. This is the reason why diabetic patients are treated by giving injections of insulin.

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