



TRY YOURSELF

ANSWERS

- Two special properties of a neuron are :
 - It does not divide.
 - It does not repair, when injured.
- Reflex actions have two important significance :
 - They enable the body to give quick responses to harmful stimuli so that chances of damage to body are decreased.
 - They prevent overloading of brain, hence prevent its fatigue.
- Human nervous system divisible into two main parts :
 - Central nervous system, (ii) Peripheral nervous system.
- The thalami are called relay centres because these conduct the impulses of touch, temperature, pain, etc., to cerebrum.
- Autonomic nervous system is that part of peripheral nervous system which controls involuntary responses, *i.e.*, those response which occur without the will of an organism. This system is subdivided into two systems – sympathetic system and parasympathetic system. Both these systems have opposing effects. If one exerts stimulatory effect on an organ, the other system exerts inhibitory effect on that organ.
- There are three components of peripheral nervous system: cranial nerves, spinal nerves and visceral nerves.
- E.H. Starling
- Hormones are synthesised and secreted by living endocrine glandular cells within the body or in cultures of endocrine cells *in vitro*. Hormones are non nutrient chemicals that act as intercellular messengers and are produced in trace amount.
 - Hormones are transported by blood stream from the endocrine cells to nerve as chemical messenger that act on target cell or organ.
- Glucocorticoid, (ii) Mineralocorticoid
- Progesterone and estrogen
- The given diagram demonstrates the phenomenon of geotropism exhibiting by a plant. The shoot is moving away from gravity exhibiting negative geotropism while the root is growing towards gravity, exhibiting positive geotropism.
- Thigmotropism is directional growth movement of curvature which occurs in response to a stimulus of contact. It is found in twiners and lianas. Where there is less growth on the side of contact and more growth on the side of branch away from the contact. Tendrils of cucurbitaceae, petiole of clematis and leaf apex of *Gloriosa* show thigmotropic movements.
- The movement of a plant part in response to an external stimulus such as light, temperature or contact in which the direction of response is not determined by the direction of stimulus is called nastic movement, *e.g.*, folding of *Mimosa* leaves in response to touch.
- The pollen tube grows towards the ovule during fertilisation due to chemotropism. During fertilisation, a chemical is produced by ovule towards which the pollen tube grows, hence showing the positive chemotropism.
- Plant hormones are chemicals present in plants which help to coordinate growth, development and responses to stimuli and environment. For example, auxins, gibberellins, cytokinins, abscisic acid are different plant hormones.
- (a) Auxin (b) Gibberellin (c) Cytokinin (d) Absciscic acid
- Plant hormones or phytohormones ('phyto' means plant) are naturally occurring organic chemical substances present in plants which bring about control and coordination of various activities in them. They do so by controlling one or the other aspect of growth of the plant. Therefore, plant hormones are also known as plant growth substances or plant growth regulators.

