

PRACTICE EXERCISE – 1

Q.1 What type of coordination is present in plants?

Q.2 What are movements of locomotion?

Q.3 Define curvature movement.

Q.4 What are autonomic movements?

Q.5 Define paratonic movements?

Q.6 What are paratonic movements of locomotion called?

Q.7 What is nyctinasty?

Q.8 Give examples of an autonomic turgor movement.

Q.9 What is haptonasty?

Q.10 Define nastic movements?

Q.11 What is tropic movement?

Q.12 Define phototropism.

Q.13 What is geotropism?

Q.14 Define thigmotropism.

Q.15 What is a plant hormone?

Q.16 Name the process by which a plant bends towards light.

Q.17 Name a growth inhibitor found in plants.

Q.18 What are auxins?

Q.19 Name a natural auxin found in plants.

Q.20 Name a synthetic auxins.

Q.21 Give one example of chemotropism.

Q.22 What are gibberellins.

Q.23 What is bakanae.

Q.24 Name a plant hormone which is essential for cell division.

Q.25 Name a gaseous plant hormone.

Q.26 Which hormone is called dormin?

Q.27 Name a synthetic cytokinin.

Q.28 What is the name of fruits which release ethylene during their ripening?

Q.29 Which hormone prevents seescence?

Q.30 Which hormone is involved in producing phototropism and geotropism?

Q.31 Name the various plant hormones. Cetegorise them into growth promoter, growth inhibitor and dual function hormones.

Q.32 Why is abscisic acid called stress hormone?

Q.33 Differentiate between nastic and tropic movements.

Q.34 Write a note on phototropism.

Q.35 Explain what is geotropism.

Q.36 Write the function of hormone thyroxine in our bodies.

Q.37 Name the part of hind brain which takes part in regulation of respiration.

Q.38 Which hormone helps in lowering the level of blood glucose in human beings.

Q.39 We suddenly withdraw our hand when a pin pricks. Name the type of response involved in this action.

Q.40 Which hormone is responsible for the development of moustache and bread in man?

Q.41 Which type of glands in human body secrete hormones? State any one location for them.

Q.42 Name the structural and functional units of human nervous system.

Q.43 How are involuntary actions and reflex actions different from each other?

PRACTICE EXERCISE – 2

Q.1 (a) What are the short fibres of a neuron known as?
 (b) What is the longest fibre of a neuron known as?

Q.2 Name the functional junction present between two adjacent nervous or nerve cells.

Q.3 The gland X secretes a hormone Y. The deficiency of hormone Y in the body makes a person dwarf whereas the excess of hormone Y makes a person giant. Name X and Y.

Q.4 Which part of the brain controls the voluntary actions?

Q.5 Give one example of a cerebral reflex.

Q.6 What are phyto-hormones?

Q.7 Which hormone is known as emergency hormone?

Q.8 Name one endocrine gland which performs dual function?

Q.9 Name the disease caused due to the failure of insulin secretion.

Q.10 Which organ secretes a hormone when the blood sugar rises. Name a digestive enzyme released by this organ.

Q.11 A particular hormone requires iodine for its synthesis. Name the endocrine gland which secretes this hormone & state its location in the human body.

Q.12 Name the largest cell present in the human body.

Q.13 Define 'hormones'. Name the hormones secreted by thyroid. Write its function. Why is the use of iodised salt advised to us?

Q.14 What is reflex action? Explain the mechanism of reflex action with a suitable example.

Q.15 Which hormone:
 (a) Prepares the body for action?
 (b) Controls the amount of sugar in blood?
 (c) Brings about changes in boys at puberty?

Q.16 (d) Brings about changes in girls at puberty?

Q.17 State the main function of pituitary gland. Write the effect of (i) excessive and (ii) slow activity of this gland on the growth of child.

Q.18 Draw a well - labelled diagram of reflex arc.

Q.19 Draw a labelled diagram of:
 (a) Human brain
 (b) Neuron

Q.20 Differentiate between tropic and nastic movements?

Q.21 Explain, how the effectors or muscles cause action or movement in the body?

Q.22 (a) What is (i) phototropism and (ii) geotropism, with a labelled diagrams described an activity to show that light & gravity change the direction that plant parts grow in.
 (b) Mention the role of the following plant hormones:
 (i) Auxin
 (ii) Abscissic acid

Q.23 (a) Name the hormone produced by thyroid gland.
 (b) Which mineral is necessary for the synthesis of the above hormone.
 (c) Name the disease suffer from deficiency of this mineral.
 (d) Write the function of above hormones.
 (e) Why is adrenal hormone also called emergency hormone.
 (f) Name the part of neuron, where information is acquired.
 (g) Name the part of neuron through which information travels.
 (h) In what form does information travels through neuron.
 (i) Where is the impulse converted into a chemical signal for onward transmission?

MULTIPLE CHOICE QUESTION'S

1. Which of the following phytohormone is not associated with the promotion of growth in plants?
 (a) auxin (b) abscisic acid
 (c) gibberellin (d) cytokinin

2. The plant hormone which triggers the fall of mature leaves and fruits from the plant body is:
 (a) auxin (b) gibberellin
 (c) abscisic acid (d) cytokinin

3. Which of the following terms denotes the movement of the root of a plant towards moisture in the soil?
 (a) thigmotropism (b) chemotropism
 (c) hydrotropism (d) geotropism

4. The growth of a pollen tube towards the ovule caused by a sugary substance as stimulus is an example of:
 (a) phototropism (b) chemotropism
 (c) gravitropism (d) photonasty

5. The bending of the shoot of a plant in response to light is called:
 (a) geotropism (b) phototropism
 (c) thigmotropism (d) photonasty

6. The stimulus in the process of thigmotropism is:
 (a) touch (b) gravity
 (c) light (d) chemical

7. A growing seedling is kept in a dark room. A burning candle is placed near it for a few days. The top part of seedling bends towards the burning candle. This is an example of:
 (a) chemotropism (b) hydrotropism
 (c) phototropism (d) geotropism

8. Which of the following acts as a stimulus in the process of hydrotropism?
 (a) hydrocarbon (b) hydrogen oxide
 (c) hydrogen chloride
 (d) hydrogen peroxide

9. The growth movement of a plant part in response to the touch of an object is called:
 (a) thigmotropism (b) hydrotropism
 (c) thigmotropism (d) geotropism

10. The climbing organs of plants like tendrils grow towards any support which they happen to touch and wind around the support. This is an example of:
 (a) chemotropism (b) nastic movement
 (c) thigmotropism (d) geotropism

11. The rate of growth in roots is increased by one of the following plant hormones. This plant hormone is:
 (a) gibberellin (b) auxin
 (c) cytokinin (d) ethene

12. When the leaves of a *Mimosa pudica* plant are touched with a finger, they fold up quickly. This is an example of:
 (a) chemotropism (b) thigmotropism
 (c) photonasty (d) thigmotropism

13. Dandelion flowers open the petals in bright light during the daytime but close the petals in dark at night. This response of dandelion flowers to light is called:
 (a) phototropism (b) thigmotropism
 (c) chemotropism (d) photonasty

14. To which of the following directional stimulus roots of a plant do not respond?
 (a) moisture (b) candle light
 (c) touch (d) gravity

15. One of the following is not caused by the growth related movement of the concerned plant part. This is:
 (a) phototropism (b) phononastic
 (c) thigmotropism (d) thigmotropism

16. The bending of the root of a plant away from a source of light is caused by a plant hormone called:
 (a) cytokinin (b) gibberellin
 (c) abscisic acid (d) auxin

17. Most of the plant hormones promote plant growth. A plant hormone which inhibits growth is:
 (a) abscisic acid (b) ethene
 (c) ascorbic acid (d) cytokinin

18. The movement of a shoot towards light is:
 (a) geotropism (b) hydrotropism
 (c) chemotropism (d) phototropism

19. The bending of the stem of a plant towards a source of light is caused by the action of a photohormone known as:
(a) abscisic acid (b) auxin
(c) gibberellins (d) cytokinin

20. Which of the following plant part exhibits negative phototropism?
(a) root (b) branch
(c) leaves (d) stem

21. Which of the following are not tropisms?
(i) growing of pollen tube in response to a sugary substance
(ii) folding up of leaves of sensitive plant in response to touch
(iii) winding of tendril around a support in response to touch
(iv) opening up of the leaves of a daisy flower in response to light
(a) (i) and (ii) (b) (ii) and (iii)
(c) (i) and (iv) (d) (ii) and (iv)

22. A cell (or group of cells) in a sense organ which is sensitive to a particular type of stimulus is called:
(a) inceptor (b) effector
(c) receptor (d) acceptor

23. Which of the following cannot be considered a receptor?
(a) ear (b) nose
(c) muscle (d) eye

24. One of the following acts as an endocrine gland as well as an exocrine gland. This one is:
(a) salivary gland (b) pancreas
(c) pituitary (d) parathyroid

25. Which of the following helps in maintaining posture and balance of the human body?
(a) cerebellum (b) cerebrum
(c) medulla (d) pons

26. The number of pairs of nerves which arises from the cord is:
(a) 21 (b) 31
(c) 41 (d) 51

27. Cerbellum, medulla and pons are the parts of:
(a) mid-brain (b) hind-brain
(c) forebrain (d) spinal cord

28. Which of the following are cerebral reflexes?
(i) a person pulls away his hand on touching a hot object
(ii) a person spits out immediately when a fly enters his mouth while talking
(iii) A person walking bare lifts his foot at once on stepping on to a nail
(iv) A person's pupil contracts at once in the presence of bright light
(a) (i) and (ii) (b) (ii) and (iii)
(c) (ii) and (iv) (d) (iii) and (iv)

29. Iodine is necessary for the synthesis of which of the following hormone?
(a) adrenaline (b) auxin
(c) thyroxine (d) insulin

30. Which of the following is a mis-matched pair?
(a) adrenaline: pituitary gland
(b) estrogen: ovary
(c) pancreas: insulin
(d) progesterone: ovary

31. One of the following is an incorrect statement about insulin. This is:
(a) it is produced in pancreas
(b) it regulates growth and development of the body
(c) it regulates blood glucose level in the blood
(d) its deficiency in the body will cause diabetes

32. The spinal cord originates from:
(a) cerebrum (b) cerebellum
(c) medulla (d) pons

33. The involuntary actions in the body are controlled by:
(a) medulla in forebrain
(b) medulla in hindbrain
(c) medulla in spinal cord
(d) medulla in midbrain

34. Which of the following is not an involuntary action?
(a) vomiting (b) chewing
(c) heart beat (d) salivation

35. Which of the following hormone prepares our body for action in emergency situations?

(a) testosterone (b) growth hormone
(c) adrenaline (d) insulin

36. One of the following controls the peristaltic movements of alimentary canal. This one is:
(a) cerebrum (b) cerebellum
(c) pons (d) medulla

37. The hormone which is associated with male puberty is called:
(a) oestrogen (b) adrenaline
(c) testosterone (d) progesterone

38. Which of the following endocrine gland does not occur as a pair in the human body?
(a) adrenal (b) pituitary
(c) testis (d) ovary

39. The junction between two adjacent neurons is called
(a) nerve junction
(b) sensory junction
(c) synapse
(d) neuro-muscular joint

40. The life processes in human are controlled and regulated by:
(a) reproductive and endocrine systems
(b) respiratory and nervous systems
(c) endocrine and digestive systems
(d) nervous and endocrine systems

41. A doctor advised a person to take injection of insulin because
(a) his blood pressure was high
(b) his heart beat was high
(c) his blood sugar was high
(d) his thyroxine level in blood was high

42. All the voluntary actions of our body are controlled by:
(a) cerebrum (b) cerebellum
(c) pons (d) medulla

43. One of the following statements is not true about thyroxine. This is
(a) Thyroid gland requires iron to synthesise thyroxine
(b) It regulates carbohydrate, protein and fat metabolism
(c) Iodine is essential for the synthesis of thyroxine

(d) Thyroid gland can enlarge due to lack of thyroxine

44. Which of the following does not act as an endocrine gland as well as an exocrine gland?
(a) testis (b) ovary
(c) pituitary (d) pancreas

45. The part of brain which controls the involuntary actions such as heart beat, breathing, blood pressure, etc is:
(a) pons
(b) medulla
(c) cerebrum
(d) cerebellum

46. Dwarfism results due to:
(a) excessive secretion of thyroxine hormone
(b) excessive secretion of growth hormone
(c) less secretion of adrenaline hormone
(d) less secretion of growth hormone

47. The dramatic changes in body features associated with puberty are mainly because of the secretions of:
(a) estrogen from testes and testosterone from ovary
(b) estrogen from adrenal gland and testosterone from pituitary gland
(c) testosterone from testes and estrogen from ovary
(d) testosterone from thyroid gland and estrogen from pituitary gland

48. Which of the following statements is correct about receptors?
(a) gustatory receptors detect taste while olfactory receptors detect smell
(b) both gustatory and olfactory receptors detect smell
(c) auditory receptors detect smell and olfactory receptors detect taste
(d) olfactory receptors detect taste and gustatory receptors detect smell.

49. The part of brain which takes part in regulating respiration in the human body is:
(a) medulla (b) pons
(c) cerebellum (d) cerebrum

50. Electrical impulse travels in a neuron from:
(a) dendrite → axon → axon end → cell

body

(b) cell body → dendrite → axon → axon end

(c) dendrite → cell body → axon → axon end

(d) axon end → axon → cell body → dendrite

ANSWERS

1. (b) 2. (c) 3. (c) 4. (d) 5. (b)

6. (a) 7. (c) 8. (b) 9. (c) 10. (c)

11. (b) 12. (b) 13. (d) 14. (c) 15. (c)

16. (d) 17. (a) 18. (d) 19. (b) 20. (a)

21. (d) 22. (c) 23. (c) 24. (b) 25. (a)

26. (b) 27. (b) 28. (d) 29. (c) 30. (a)

31. (b) 32. (c) 33. (b) 34. (b) 35. (c)

36. (d) 37. (c) 38. (b) 39. (c) 40. (d)

41. (c) 42. (a) 43. (a) 44. (c) 45. (b)

46. (d) 47. (c) 48. (a) 49. (b) 50. (c)