

CBSE CLASS X
Science (086)**QUESTION PAPER***From previous CBSE Board Exam questions***Code: A39EPS****Questions: 67****Maximum Marks: 147****Generated: 2026-06-15 13:05****SELECTIONS USED**

Source	Previous-year board
Subject	Science
Lessons	Control and Coordination
Year	2022-2026
Questions selected	67

Composition — Types: 24 MCQ · 16 Short · 13 Very short · 8 Long · 2 Assertion–reason · 2 source_based · 2 Case-based

Q1. § 6.2.2 Movement Due to Growth**[1]**

The growth of tendrils in grapes plants is due to :

- (A) Effect of light
- (B) Effect of gravity
- (C) Rapid cell division in tendril cells in contact with the support
- (D) Rapid cell division in tendril cells that are away from the support

Previously asked in: 2026 31/3/1 Q7

♦ **Control and Coordination**

Tropic Movements – Thigmotropism

Q2. § 6.2.2 Movement Due to Growth**[1]**

Identify the type of tropic movement that is responsible for the movement of the pollen tube towards an ovule from the following options.

- (A) Hydrotropism
- (B) Geotropism
- (C) Chemotropism
- (D) Phototropism

Previously asked in: 2026 31/2/1 Q2

♦ **Control and Coordination**

Chemotropism

Q3. § 6.1 ANIMALS – NERVOUS SYSTEM**[2]**

What happens at synapse between two neurons ? State briefly.

Previously asked in: 2023 31/6/1 Q22(b)

♦ **Control and Coordination**

Synapse – transmission of nerve impulse between two neurons

Q4. § 6.1 ANIMALS – NERVOUS SYSTEM § 6.2.1 Immediate Response to Stimulus § 6.3 HORMONES IN ANIMALS**[1]**

In a nerve cell, the site where the electrical impulse is converted into a chemical signal is known as :

- (a) Axon
- (b) Dendrites
- (c) Neuromuscular junction
- (d) Cell body

Previously asked in: 2024 31/1/1 Q10

♦ **Control and Coordination**

Synapse – conversion of electrical impulse to chemical signal

Q5. § 6.1 ANIMALS – NERVOUS SYSTEM**[1]**

The part in which gustatory receptors are present in our body is :

- (a) inner ear
- (b) skin
- (c) tongue
- (d) inner lining of nose

Previously asked in: 2023 31/5/1 Q11

♦ **Control and Coordination**

Gustatory Receptors

Q6. § 6.1 ANIMALS – NERVOUS SYSTEM**[1]**

The sense organ in which olfactory receptors are present is :

- (A) Nose
- (B) Skin
- (C) Tongue
- (D) Inner ear

Previously asked in: 2024 31/5/1 Q8

♦ **Control and Coordination**

Olfactory receptors and the sense of smell (nose)

Q7. § 6.1 ANIMALS – NERVOUS SYSTEM**[1]**

In a synapse, the chemical signal is transmitted from :

- (A) Dendritic end of one neuron to axonal end of another neuron.
- (B) Axon to cell body of the same neuron.
- (C) Cell body to axonal end of the same neuron.
- (D) Axonal end of one neuron to dendritic end of another neuron.

Previously asked in: 2026 31/3/1 Q4

♦ **Control and Coordination**

Synapse and Chemical Signal Transmission

Q8. § 6.1 ANIMALS – NERVOUS SYSTEM § 6.1.1 What happens in Reflex Actions? § 6.2 COORDINATION IN PLANTS**[2]**

State two differences between the act of chewing food and salivation on sight of food.

Previously asked in: 2026 31/1/1 Q11(a)

♦ **Control and Coordination**

Reflex action vs voluntary action

Q9. § 6.1.2 Human Brain**[3]**

In the given diagram

- (i) Name the parts labelled A, B, and C.
- (ii) Write the functions of A and C.
- (iii) Reflex arcs have evolved in animals ? Why ?

Previously asked in: 2023 31/6/1 Q29(b)

♦ **Control and Coordination** Evolution and Significance of Reflex Arcs in Animals Functions of Components of Reflex Arc
Reflex Arc – Structure and Components

Q10. § 6.1.1 What happens in Reflex Actions? § 6.1.2 Human Brain**[3]**

Define reflex action. With the help of a flow chart show the path of a reflex action such as sneezing.

Previously asked in: 2024 31/1/1 Q30

♦ **Control and Coordination** Reflex Action and Reflex Arc

Q11. § 6.1.1 What happens in Reflex Actions? § 6.1.2 Human Brain § 6.1.4 How does the Nervous Tissue cause Action?**[5]**

Answer the following about voluntary action and reflex action.

- (a) Differentiate between voluntary and involuntary action.
- (b) Define reflex action. With the help of a flow diagram, show the correct sequence of path of Nerve impulse from place of its origin.

Previously asked in: 2025 31/5/1 Q35 (B)

♦ **Control and Coordination** Reflex Action and Reflex Arc Voluntary vs Involuntary Actions

Q12. § 6.1 ANIMALS – NERVOUS SYSTEM § 6.1.1 What happens in Reflex Actions?**[1]**

The correct sequence of events that occur when a person unknowingly touches a hot object is :

- (A) Receptors in skin → Relay neuron → Sensory neuron → Motor neuron → Effector muscle in arm
- (B) Receptors in skin → Sensory neuron → Relay neuron → Motor neuron → Effector muscle in arm
- (C) Receptors in skin → Sensory neuron → Relay neuron → Motor neuron → Effector muscle in arm
- (D) Receptors in skin → Sensory neuron → Motor neuron → Relay neuron → Effector muscle in arm

Previously asked in: 2024 31/5/1 Q7

♦ **Control and Coordination** Reflex Arc and Sequence of Reflex Action

Q13. § 6.1.2 Human Brain**[5]**

- (i) Define a reflex arc. Why have reflex arcs evolved in animals ? Trace the sequence of events which occur, when you suddenly touch a hot object.
- (ii) Name the part of nervous system which helps in communication between the central nervous system and other parts of the body. What are the two components of this system ?

Previously asked in: 2024 31/4/1 Q35 (a)

♦ **Control and Coordination** Peripheral Nervous System and its Components (Somatic and Autonomic Nervous System)
Reflex Arc – Definition, Evolution, and Sequence of Events

Q14. § 6.1.2 Human Brain

[1]

Assertion (A) : In our actions of writing or talking, our nervous system communicates with the muscles.

Reason (R) : Cranial nerves and spinal nerves form the peripheral nervous system.

- (A) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
(B) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).
(C) Assertion (A) is true, but Reason (R) is false.
(D) Assertion (A) is false, but Reason (R) is true.

Previously asked in: 2025 31/3/1 Q18

♦ Control and Coordination

Nervous system communicating with muscles (voluntary actions)

Peripheral nervous system – cranial and spinal nerves

Q15. § 6.3 HORMONES IN ANIMALS

[2]

Electrical impulse is an excellent means to transmit information in the animal body, but there are some limitations to the use of electrical impulses. State any two limitations.

Previously asked in: 2026 31/2/1 Q10 (b)

♦ Control and Coordination

Limitations of electrical impulse as a means of information transmission

Q16. § 6.1.2 Human Brain § 6.1.4 How does the Nervous Tissue cause Action?

[1]

Give differences between the following : Sensory nerve and motor nerve

Previously asked in: 2026 31/1/1 Q14 (b)

♦ Control and Coordination

Sensory neuron vs motor neuron

Q17. § 6.1.1 What happens in Reflex Actions? § 6.1.2 Human Brain

[1]

Assertion (A) : Reflex actions do not involve thinking.

Reason (R) : Most reflex actions are controlled by the spinal cord.

- A Both, Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of the Assertion (A).
B Both, Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of the Assertion (A).
C Assertion (A) is true, but Reason (R) is false.
D Assertion (A) is false, but Reason (R) is true.

Previously asked in: 2026 31/1/1 Q8

♦ Control and Coordination

Reflex Action and Reflex Arc

Q18. § 6.1.2 Human Brain

[1]

Human brain has various parts or regions that help in different actions, responses and coordination. From the following, identify the part responsible for precision of voluntary actions :

- A Cerebrum
B Cerebellum
C Medulla
D Pons

Previously asked in: 2026 31/1/1 Q4

♦ Control and Coordination

Human brain – parts and functions (cerebellum: precision of voluntary actions)

Q19. § 6.1 ANIMALS – NERVOUS SYSTEM § 6.1.1 What happens in Reflex Actions?

[2]

Sunil unconsciously touched the hot iron rod and immediately withdrew his hand. Which type of action is involved ? Also define this action. Draw a flow chart to show the path followed for this action.

Previously asked in: 2026 31/4/1 Q12 (B)

♦ Control and Coordination

Reflex Action and Reflex Arc

Q20. § 6.1.2 Human Brain § 6.1.3 How are these Tissues protected? § 6.1.4 How does the Nervous Tissue cause Action?

[3]

Answer the following:

- (a) List two constituents of Central Nervous System (CNS). How are these components protected from injuries ?
- (b) Write two limitations of the use of electrical impulses.

Previously asked in: 2024 31/3/1 Q30

♦ **Control and Coordination** Central Nervous System (CNS) – components and protection

Limitations of electrical impulses as a means of communication in the body

Q21. § 6.1.3 How are these Tissues protected?

[2]

Answer the following about the human brain.

- (a) How is brain protected in our body ?
- (b) A doctor finds in one of his patients that he is not maintaining a proper posture and balance of his body. State the region of brain and also the part of brain which is responsible for it.

Previously asked in: 2025 31/6/1 Q22

♦ **Control and Coordination** Cerebellum – Role in Posture and Balance Protection of the Brain (Skull and Cerebrospinal Fluid)

Q22. § 6.1.2 Human Brain

[1]

Which among the following is not a neural action controlled by the part of human brain labelled 'X' in the figure above?

- A Salivation
- B Hunger
- C Vomiting
- D Blood Pressure

Previously asked in: 2025 31/5/1 Q9

♦ **Control and Coordination** Parts of the Human Brain and their Functions

Q23. § 6.1.2 Human Brain

[2]

(A) Name the part of brain which is responsible for the following actions :

- (i) Maintaining posture and balance
- (ii) Beating of heart
- (iii) Thinking
- (iv) Blood pressure

Previously asked in: 2023 31/4/1 Q22 (A)

♦ **Control and Coordination** Parts of the Brain and their Functions

Q24. § 6.1.3 How are these Tissues protected?

[1]

The part of the brain which maintains the posture and balance of the body is :

- (A) Pons
- (B) Cerebrum
- (C) Cerebellum
- (D) Medulla

Previously asked in: 2025 31/3/1 Q7

♦ **Control and Coordination** Parts of the Brain and their Functions – Cerebellum

Q25. § 6.1 ANIMALS – NERVOUS SYSTEM § 6.1.2 Human Brain § 6.1.3 How are these Tissues protected?**[1]**

Following are the statements about the different parts of the brain. Select the correct statements.

- (i) The thinking part of the brain is the forebrain.
- (ii) Centres for smell, hearing, memory, sight are located in forebrain.
- (iii) Salivation, vomiting, blood pressure are controlled by medulla in the hind brain.
- (iv) Cerebellum does not control the posture and balance of the body.

- (A) (i), (ii) and (iii)
- (B) (ii), (iii) and (iv)
- (C) (i), (ii) and (iv)
- (D) (i), (iii) and (iv)

Previously asked in: 2026 31/4/1 Q5

♦ **Control and Coordination**

Human Brain (Forebrain, Midbrain, Hindbrain)

Q26. § 6.1.1 What happens in Reflex Actions?**[4]**

In life there are certain changes in the environment called 'stimuli' to which we respond appropriately. Touching a flame suddenly is a dangerous situation for us. One way is to think consciously about the possibility of burning and then moving the hand. But our body has been designed in such a way that we save ourselves from such situations immediately.

Read the source and answer the questions that follow.

- (i) Name the action by which we protect ourselves in the situation mentioned above and define it. [1]
- (ii) Write the role of (a) motor and (b) relay neuron. [1]
- (iii) What are the two types of nervous system in human body? Name the components of each of them. [2]

Previously asked in: 2025 31/4/1 Q38

♦ **Control and Coordination**

Central and Peripheral Nervous System – Components

Reflex Action and Reflex Arc

Types of Neurons – Motor and Relay Neuron

Q27. § 6.2 COORDINATION IN PLANTS § 6.2.2 Movement Due to Growth**[1]**

Select from the following the correct statement about tropic movement in plants :

- (a) It is due to stimulus of touch and temperature.
- (b) It does not depend upon the direction of stimulus received.
- (c) It is observed only in roots and not in stems.
- (d) It is a growth related movement.

Previously asked in: 2023 31/1/1 Q11

♦ **Control and Coordination**

Tropic Movements in Plants

Q28. § 6.2 COORDINATION IN PLANTS § 6.2.1 Immediate Response to Stimulus**[2]**

How is the movement of leaves of a sensitive plant different from the downward movement of the roots ?

Previously asked in: 2024 31/1/1 Q23(A)

♦ **Control and Coordination**

Tropic vs. Nastic movements – touch-sensitive plant (Mimosa pudica) vs. geotropism in roots

Q29. § 6.2 COORDINATION IN PLANTS § 6.2.1 Immediate Response to Stimulus**[1]**

Observe the given figures A and B. When chhui-mui (sensitive) plant is touched, its leaves fold. This is due to :

- (A) Hormonal effect
- (B) Thermal effect
- (C) Change in amount of water in cells
- (D) Electromagnetic effect

Previously asked in: 2025 31/2/1 Q8

♦ **Control and Coordination** Nastic movements in plants – Touch-sensitive response of Mimosa pudica (chhui-mui)

Q30. § 6.2 COORDINATION IN PLANTS § 6.2.1 Immediate Response to Stimulus § 6.2.2 Movement Due to Growth**[1]**

The plant hormone whose concentration stimulates the cells to grow longer on the side of the shoot which is away from light is :

- (A) Cytokinins
- (B) Gibberellins
- (C) Adrenaline
- (D) Auxins

Previously asked in: 2025 31/1/1 Q9

♦ **Control and Coordination** Auxin and Phototropism

Q31. § 6.2 COORDINATION IN PLANTS § 6.2.1 Immediate Response to Stimulus § 6.2.2 Movement Due to Growth**[1]**

A plant growth inhibitor hormone which causes wilting of leaves is called :

- A Auxin
- B Cytokinin
- C Absciscic acid
- D Gibberellin

Previously asked in: 2024 31/4/1 Q7

♦ **Control and Coordination** Plant Growth Inhibitor Hormones – Absciscic Acid (ABA) and Wilting of Leaves

Q32. § 6.2.1 Immediate Response to Stimulus**[2]**

List two differences between the movement of leaves of a sensitive plant and the movement of a shoot towards light.

Previously asked in: 2023 31/6/1 Q22(a)

♦ **Control and Coordination** Differences between nastic and tropic movements in plants

Nastic movement (Thigmonasty) in sensitive plant (Mimosa pudica) Tropic movement – Phototropism in shoot

Q33. § 6.2 COORDINATION IN PLANTS § 6.2.1 Immediate Response to Stimulus § 6.2.2 Movement Due to Growth**[2]**

Where are auxins synthesized ? How do they promote phototropism ?

Previously asked in: 2024 31/3/1 Q22

♦ **Control and Coordination** Role of auxins in phototropism Synthesis and site of production of auxins

Q34. § 6.2 COORDINATION IN PLANTS**[5]**

(i) Leaves of chhui-mui plant begin to fold up and droop in response to a stimulus. Name the stimulus and write the cause for such a rapid movement. Is there any growth involved in the movement ?

(ii) Define geotropism in plants. What is meant by positive and negative geotropism ? Give one example of each type.

Previously asked in: 2024 31/4/1 Q35 (b)

♦ **Control and Coordination** Geotropism – positive and negative geotropism with examples

Nastic movements – Touch stimulus in Mimosa pudica (chhui-mui)

Q35. § 6.2 COORDINATION IN PLANTS § 6.2.1 Immediate Response to Stimulus [3]

Plants have neither a nervous system nor muscles, even then they respond to stimuli. For example, the leaves of chhui-mui (touch-me-not) plant when touched begin to fold up and droop.

- (a) How is the information communicated in "touch-me-not" plants ? [1]
- (b) What enables the plant cells to bring out the observable response ? [1]
- (c) Differentiate the movement mentioned above from the movement of tendrils in a pea plant. [1]

Previously asked in: 2025 31/1/1 Q29

♦ **Control and Coordination** Nastic movement vs. Tropic movement – touch-me-not (seismonastic) vs. tendril movement (thigmotropism)
Plant movements – touch-me-not (*Mimosa pudica*) response and electrical/ionic signal transmission
Turgor pressure changes in plant cells enabling movement

Q36. § 6.3 HORMONES IN ANIMALS [3]

Name the gland and the hormone secreted by it in scary situations in human beings. List any two responses shown by our body when this hormone is secreted into the blood.

Previously asked in: 2023 31/6/1 Q29(a)

♦ **Control and Coordination** Adrenal gland and adrenaline (epinephrine) – fight or flight response

Q37. § 6.2.1 Immediate Response to Stimulus § 6.3 HORMONES IN ANIMALS [3]

State two limitations of electrical impulses in multicellular organisms. Why is chemical communication better than electrical impulses as a means of communication between cells in multicellular organisms?

Previously asked in: 2025 31/4/1 Q30

♦ **Control and Coordination** Chemical communication vs electrical impulses in multicellular organisms
Limitations of electrical impulses in multicellular organisms

Q38. § 6.3 HORMONES IN ANIMALS [3]

Name the hormone released and the gland which secretes it in human beings during scary situations. How does the body respond to enable it to deal with the situation ?

Previously asked in: 2023 31/2/1 Q30

♦ **Control and Coordination** Adrenaline hormone and fight-or-flight response

Q39. § 6.1.2 Human Brain § 6.1.3 How are these Tissues protected? [1]

Walking in a straight line and riding a bicycle are the activities which are possible due to a part of the brain. Choose the correct location and name of this part from the given table :

- (a) Fore brain | Cerebrum
- (b) Mid brain | Hypothalamus
- (c) Hind brain | Cerebellum
- (d) Hind brain | Medulla

Previously asked in: 2023 31/6/1 Q6

♦ **Control and Coordination** Cerebellum – location and function in coordinating voluntary movements

Q40. § 6.1.4 How does the Nervous Tissue cause Action? [2]

Answer the following:

- (a) Write the role of insulin in regulating blood sugar levels in human body. Mention the disease caused due to it.
- (b) How is the timing and the amount of release of insulin in the blood regulated ?

Previously asked in: 2023 31/1/1 Q22

♦ **Control and Coordination** Feedback Mechanism in Hormonal Regulation Role of Insulin in Blood Sugar Regulation and Diabetes

Q41. § 6.1.2 Human Brain § 6.1.3 How are these Tissues protected? § 6.2 COORDINATION IN PLANTS**[5]**

Answer the following :

- (i) Distinguish between hormonal co-ordination in plants and animals.
- (ii) Which part of the brain is responsible for – (1) intelligence (2) riding a bicycle (3) vomiting (4) controlling hunger
- (iii) How is brain and spinal-cord protected against mechanical injuries ?

Previously asked in: 2024 31/2/1 Q35(a)

♦ **Control and Coordination** Hormonal coordination in plants vs animals Parts of the Brain and their Functions
Protection of brain and spinal cord

Q42.**[1]**

Select out of the following a gland which does NOT occur as a pair in the human body :

- (A) Pituitary
- (B) Ovary
- (C) Testis
- (D) Adrenal

Previously asked in: 2024 31/2/1 Q9

♦ **Control and Coordination** Endocrine Glands – Paired vs Unpaired Glands in Human Body

Q43. § 6.1.3 How are these Tissues protected? § 6.3 HORMONES IN ANIMALS**[1]**

A pair of endocrine glands located in the human brain is

- (A) Parathyroid and Pituitary
- (B) Pineal and Thymus
- (C) Hypothalamus and Thymus
- (D) Hypothalamus and Pineal

Previously asked in: 2025 31/6/1 Q9

♦ **Control and Coordination** Endocrine Glands in the Brain (Hypothalamus and Pituitary)

Q44. § 6.2 COORDINATION IN PLANTS § 6.2.1 Immediate Response to Stimulus**[5]**

Answer the following:

- (i) List three points of difference between nervous and hormonal mechanisms for control and coordination in animals.
- (ii) How are auxins related with the bending of plant shoot towards unidirectional light ? Explain.

Previously asked in: 2023 31/2/1 Q35 (a)

♦ **Control and Coordination** Differences between nervous and hormonal mechanisms of control and coordination
Role of auxins in phototropism / bending of plant shoot towards unidirectional light

Q45. § 6.1.4 How does the Nervous Tissue cause Action? § 6.3 HORMONES IN ANIMALS**[3]**

Taking the example of any two animal hormones along with their gland of secretion, explain how these hormones help (i) in growth and development and (ii) regulate metabolism, in the body.

Previously asked in: 2024 31/5/1 Q29

♦ **Control and Coordination** Animal hormones – glands of secretion and their functions Role of hormones in growth and development
Role of hormones in regulation of metabolism

Q46. § 6.3 HORMONES IN ANIMALS**[4]**

A person while climbing up a rocky hill comes into a panic state and fear. His body starts reacting in a "flight-or-fight" condition to adjust to the dangerous and stressful situation.

Read the following case and answer the questions that follow.

- (a) (i) Name the hormone secreted in the blood of the person in this situation. [1]
- (b) State any two responses in the body of the person as a result of the secretion of this hormone. [2]
- (c) How does the action of the chemical signal in terms of hormones differ from the electrical impulses via nerve cells ? [1]

Previously asked in: 2025 31/3/1 Q38

♦ **Control and Coordination** Adrenaline hormone and fight-or-flight response

Hormonal vs. nervous system coordination – chemical signals vs. electrical impulses

Q47. § 6.2.1 Immediate Response to Stimulus § 6.3 HORMONES IN ANIMALS**[2]**

Answer the following: "Hormones should be secreted in precise quantities. We have a feedback mechanism through which this is done." With the help of an example justify the statement.

Previously asked in: 2025 31/2/1 Q29 (b)

♦ **Control and Coordination** Feedback Mechanism in Hormone Secretion

Q48. § 6.3 HORMONES IN ANIMALS**[1]**

Answer the following: Define hormone.

Previously asked in: 2025 31/2/1 Q29 (a)

♦ **Control and Coordination** Definition of Hormone

Q49. § 6.1 ANIMALS – NERVOUS SYSTEM § 6.1.2 Human Brain § 6.1.3 How are these Tissues protected?**[2]**

Name the parts of hind-brain of the human brain. Which part of the hind-brain controls involuntary actions such as blood pressure and salivation ?

Previously asked in: 2025 31/2/1 Q23

♦ **Control and Coordination** Medulla Oblongata – Control of Involuntary Actions

Parts of the Hind-brain (Cerebellum, Pons, Medulla Oblongata)

Q50. § 6.1.2 Human Brain**[1]**

Walking in a straight line and riding a bicycle are activities which are possible due to coordination of which part of the brain ?

- (A) Fore-Brain – Cerebrum
(B) Mid-Brain – Cerebellum
(C) Hind-Brain – Cerebellum
(D) Hind-Brain – Medulla

Previously asked in: 2026 31/3/1 Q3

♦ **Control and Coordination** Cerebellum – coordination of voluntary muscle activities

Q51. § 6.1.1 What happens in Reflex Actions? § 6.1.2 Human Brain**[4]**

A middle-aged person is facing some cognitive changes in himself. His early symptoms included mild forgetfulness. For example, forgetting where he left his mobile or failing to find words to complete his sentences. He was facing problems in driving a car, climbing up and down the stairs, inserting a plug into an outlet. He slowly developed a sad mood and anxiety.

Read the following passage and answer the questions that follow :

- (a) What are voluntary actions ? [1]
(b) Which part of the brain is responsible for precision of voluntary actions ? [1]
(c) Answer (i) or (ii): [2]

Previously asked in: 2026 31/2/1 Q15

♦ **Control and Coordination** Brain structure and functions (forebrain, midbrain, hindbrain)
Role of the cerebellum in precision of voluntary actions Voluntary actions and their control

Q52. § 6.3 HORMONES IN ANIMALS**[2]**

"The timing and the amount of hormone secreted by a gland are regulated in the human body." Justify this statement with the help of an example.

Previously asked in: 2026 31/2/1 Q10 (a)

♦ **Control and Coordination** Feedback Mechanism in Hormone Regulation

Q53. § 6.3 HORMONES IN ANIMALS**[1]**

Identify the endocrine gland that regulates the growth of human body.

- (A) Pituitary gland
(B) Thyroid gland
(C) Pancreas
(D) Adrenal gland

Previously asked in: 2026 31/5/1 Q2

♦ **Control and Coordination** Endocrine Glands and Hormones – Pituitary Gland and Growth Hormone

Q54. § 6.3 HORMONES IN ANIMALS**[1]**

Give reasons for the following : Adrenal gland is known as the stress gland of the body.

Previously asked in: 2026 31/4/1 Q13 (a)

♦ **Control and Coordination** Endocrine System and Hormones (Adrenaline/Adrenal Gland)

Q55. § 6.2 COORDINATION IN PLANTS § 6.2.1 Immediate Response to Stimulus**[1]**

Select from the following a plant hormone which promotes cell division.

- A Gibberellins
B Auxins
C Abscissic Acid
D Cytokinins

Previously asked in: 2024 31/3/1 Q8

♦ **Control and Coordination** Plant Hormones – Cytokinin (promotes cell division)

Q56. § 6.2 COORDINATION IN PLANTS § 6.2.1 Immediate Response to Stimulus § 6.2.2 Movement Due to Growth**[5]**

Answer the following :

- (i) What are tropic movements ? Give an example of a plant hormone which (1) inhibits growth and (2) promotes cell division.
- (ii) Explain directional movement of a tendril in pea plant in response to touch. Name the hormone responsible for this movement.

Previously asked in: 2024 31/2/1 Q35(b)

♦ **Control and Coordination**

Plant Hormones – Absciscic Acid (growth inhibitor) and Cytokinin (promotes cell division)

Thigmotropism – Tendril movement in pea plant

Tropic Movements in Plants

Q57. § 6.3 HORMONES IN ANIMALS**[2]**

There is a hormone which regulates carbohydrate, protein and fat metabolism in our body. Name the hormone and the gland which secretes it. Why is it important for us to have iodised salt in our diet?

Previously asked in: 2024 31/1/1 Q23(B)

♦ **Control and Coordination**

Importance of iodised salt and iodine deficiency (goitre)

Thyroxine hormone and thyroid gland

Q58. § 6.2 COORDINATION IN PLANTS § 6.2.2 Movement Due to Growth**[4]**

The growth movements of plant parts in which the direction of the stimulus determines the direction of the response is known as tropic movements or tropism. Plants also have non-directional movements which may not be growth dependent.

Read the source and study the figure, then answer the sub-parts that follow.

- (I) Name the movement which causes 'X' and 'Y' to grow downwards and upwards respectively. (Refer above figure) [1]
- (II) Write the name of a hormone that plays a major role in (i) falling of leaves (ii) rapid cell division [1]
- (III) Answer either (a) or (b). [2]

Previously asked in: 2025 31/6/1 Q38

♦ **Control and Coordination**

Non-directional (Nastic) movements in plants

Plant hormones – Auxin, Cytokinin, Absciscic acid

Tropic movements (Geotropism) in plants

Q59. § Introduction § 6.2.1 Immediate Response to Stimulus § 6.3 HORMONES IN ANIMALS**[5]**

Answer the following about chemical control in organisms.

- (a) Analyse the given situations and interpret the possible reason for each : (i) Iodine deficiency in diet increases the possibility of a disease of swollen neck in a person. (ii) Some people in population may have very short heights (dwarfs). (iii) Thick facial hairs develop in boys at the age of 10-12 years.
- (b) Explain two reasons which necessitate the need of chemical communication in multicellular organisms.

Previously asked in: 2025 31/5/1 Q35 (A)

♦ **Control and Coordination**

Growth hormone deficiency and dwarfism (pituitary gland)

Iodine deficiency and goitre (thyroid gland)

Need for chemical communication (hormones) in multicellular organisms

Testosterone and secondary sexual characteristics in males

Q60. § 6.2 COORDINATION IN PLANTS § 6.2.2 Movement Due to Growth**[1]**

The plant hormones promoting rapid cell division in seeds and wilting of leaves respectively are

- A Auxins and Absciscic acid
- B Cytokinins and Absciscic acid
- C Gibberellins and Auxins
- D Absciscic acid and Gibberellins

Previously asked in: 2025 31/5/1 Q11

♦ Control and Coordination

Plant Hormones and Their Functions

Q61. § 6.1 ANIMALS – NERVOUS SYSTEM § 6.1.2 Human Brain § 6.1.4 How does the Nervous Tissue cause Action?**[2]**

Write the name and function of parts (i) and (ii) in the diagram of a neuron given below.

Previously asked in: 2023 31/5/1 Q22

♦ Control and Coordination

Functions of neuron components (dendrites, axon, cell body, etc.)

Structure and parts of a neuron

Q62. § 6.2 COORDINATION IN PLANTS § 6.2.1 Immediate Response to Stimulus**[2]**

(B) Where are auxins synthesized in a plant ? Which organ of the plant shows :

- (i) Positive phototropism
- (ii) Negative geotropism
- (iii) Positive hydrotropism

Previously asked in: 2023 31/4/1 Q22 (B)

♦ Control and Coordination

Auxins – site of synthesis and functions

Tropic movements – phototropism, geotropism, and hydrotropism

Q63. § 6.2 COORDINATION IN PLANTS § 6.2.1 Immediate Response to Stimulus § 6.2.2 Movement Due to Growth**[1]**

In plants the role of cytokinin is :

- (a) Promote cell division.
- (b) Wilting of leaves.
- (c) Promote the opening of stomatal pore.
- (d) Help in the growth of stem.

Previously asked in: 2023 31/4/1 Q11

♦ Control and Coordination

Plant Hormones – Cytokinin

Q64.**[5]**

Answer the following:

- (i) Name the disorder which a person is likely to suffer from due to the following : (I) Over-secretion of growth hormone, (II) Deficiency of oestrogen in females, (III) Less secretion of thyroxine. Also name the gland that secretes each of the hormones mentioned above.
- (ii) How is the timing and amount of hormone released regulated ? Explain with the help of an example.

Previously asked in: 2023 31/2/1 Q35 (b)

♦ Control and Coordination

Feedback mechanism regulating hormone secretion

Hormonal disorders due to over/under secretion (Growth hormone, Oestrogen, Thyroxine)

Q65. § 6.2 COORDINATION IN PLANTS § 6.2.1 Immediate Response to Stimulus**[1]**

The plant hormone present in greater concentration in the areas of rapidly dividing cells is :

- (A) Auxin
- (B) Cytokinins
- (C) Gibberellins
- (D) Absciscic acid

Previously asked in: 2025 31/3/1 Q8

♦ **Control and Coordination** Plant Hormones – Cytokinins and Cell Division

Q66. § 6.2 COORDINATION IN PLANTS § 6.2.1 Immediate Response to Stimulus § 6.2.2 Movement Due to Growth**[2]**

Which of the plant hormones are responsible for the following processes ?

- (i) Promote cell division
- (ii) Inhibition of growth
- (iii) Detection of light
- (iv) Wilting of leaves

Previously asked in: 2026 31/5/1 Q11 ((B))

♦ **Control and Coordination** Plant Hormones and Their Functions

Q67. § 6.2 COORDINATION IN PLANTS § 6.2.1 Immediate Response to Stimulus**[4]**

Plants exhibit movements in response to various environmental stimuli to adopt and survive in their surroundings. These movements, influenced by external factors such as light, gravity, water and chemicals are regulated by specific plant hormones. For example, the differential growth of plant parts allows them to bend, grow or orient themselves in particular directions. Roots and shoots often show contrasting response to the same stimulus, highlighting the complex mechanisms involved in plant growth and development.

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- (a) Why is hydrotropism essential for plants ?
- (b) What role does auxin play in the growth of plants ?
- (c) Differentiate between movement shown by the sensitive plant and tropic movement by plants (Two points).

Previously asked in: 2026 31/4/1 Q15

♦ **Control and Coordination** Plant Hormones (Auxin and others)
Tropic Movements in Plants (Phototropism, Geotropism, Hydrotropism, Chemotropism)

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