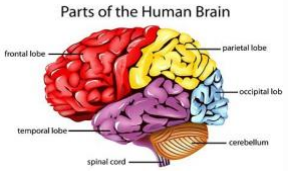
Control and coordination



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Nervous System

1. **Name the largest part of the hind-brain**
2. **Name the system which facilitates the communication between the central nervous system and the other body parts of the body**
3. **Trace the sequence of events through a reflex arc which occur when a bright light is focussed on your**
4. **Why is chemical communication better than electrical impulses as a means of communication between cells in a multi-cellular organism**
5. **What is synapse? In a neuron cell how is an electrical impulse created and what is the role of synapse in this context.**
6. **Name the part of human brain which controls: voluntary actions (ii) involuntary actions.**
7. **State the significance of peripheral nervous system. Name the components of this nervous system and distinguish between their origins**
8. **Ram has met with an accident and after that he lost the capacity to walk in a straight line (b) smell anything (c) feel full after eating. Which part of brain is damaged in each case?**
9. **Draw the structure of the neuron.**
   (b) What happens at the synapse between the two neurons?
10. **If you happen to touch a hot object what would be your response ? With the help of well labelled diagram explain how explain how this response happen**
11. **Name the two components of central nervous system. How are they protected? Name the component which is considered as highest coordinating centre of the body. Describe its three regions.**
12. **A squirrel is in a scary situation. Its body has to prepare for either fighting or running away. State the immediate changes that take place in its body so that the squirrel is able to either fight or run**
13. **A cheetah, on seeing a prey, moves towards him at a very high speed. What causes the movement of his muscles? How does the chemistry of cellular components of muscles change during this event?**
14. **Draw a diagram of cross-sectional view of human brain as given below on your answer sheet and label:**
    a) **The part that helps in performing voluntary actions.**
    b) **The part that controls salivation and vomiting.**
    c) **The largest part of fore-brain.**
    d) **A fluid that protects the brain.**
    e) **Meninges.**
15. **Name the sensory receptors found in the nose and on the tongue**
    Name two tissues which provide control and coordination in animals
    Name the two components of peripheral nervous system
16. **Name one gustatory receptor and one olfactory receptor present in human beings.**

(b) Write a and b in the given flow chart of neuron through which information travels as an electrical impulse.

17. **Define the following: (a) Reflex action (b) Synapse**
18. **Name the communication between central nervous system which facilitates system and the other parts of the body Mention two types of nerves it consists of along with their organs of origin**
19. **Write three main functions of the nervous system**
20. **How is an electric impulse created in human nervous system? Identify the parts of a neuron which helps the nerve impulse to travel (1) towards the cell body. (ii) away from the cell body**
21. **Name the part of brain which controls**

(i) voluntary action, (ii) involuntary action.

(b) What is the significance of the peripheral nervous system? Name the components of this nervous system and distinguish between the origin of the two

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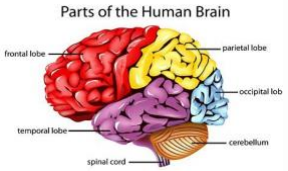

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22. Name the part of brain which is responsible for the following actions: [2023
(i) Maintaining posture and balance (ii) Beating of heart (iii) Thinking (iv) Blood pressure
23. Plants do not have any nervous system but yet, if we touch a sensitive plant, some observable changes take place its leaves. Explain how could this plant respond to the external stimuli and how it is communicated. [2019
(b) Name the hormone that needs to be administered to
(i) increase the height of a dwarf plant. (ii) cause rapid cell division in fruits and seeds
24. Nervous and hormonal systems together perform the function of control and coordination in human beings. Justify this statement with the help of an example
25. State the function of receptors in our body. Think of any three situations where receptors in the body do not work properly. Mention the problems which are likely to arise.
26. Define reflex action. State its significance.

Hormones in Animals

1. Name the gland and the hormone secreted by the gland, which are associated with following problems:
   (i) A girl has grown extremely tall. (ii) A woman has a swollen neck.
2. "As the blood sugar level in our body falls insulin secretion is reduced." Justify this statement in the reference of feedback mechanism that regulates the timing and amount of hormone released
3. How does feedback mechanism regulate the hormone secretion? Explain with the help of an example.
4. State the source of secretion and function of the following hormones:
   (i) Thyroxin (ii) Growth hormone.
5. Write two points of differences between enzymes and hormones.
   Name one endocrinal gland in our body which performs dual function. Write the functions
6. Pertaining to endocrine system, what will you interpret if:
   (i) you observe swollen neck in people living in the hills?
   (ii) over secretion of Growth Hormone takes place during childhood?
   (iii) facial hair develops in boys aged 13
7. Name the gland that secrete: Thyroxin. (b) Insulin,
8. Explain with an example ,how the timing and amount of hormone secreted are regulated in a human body.
9. Write the names of the hormones secreted by pituitary gland and adrenal gland. State their functions in the body.
10. Explain feedback mechanism for regulation of hormonal secretion with the help of example.
11. Define hormone, Write four characteristics of hormones in humans.
12. (b) Name the disorder caused by the following situations:
   (i) Under secretion of growth hormone (ii) Over secretion of growth hormone.
   (ii) Under secretion of insulin. (iv) Deficiency of iodine
13. Name the hormone which is released into the blood when its sugar level rises. Name the organ which produces this hormone and its effect on blood sugar level. Also mention the digestive enzymes secreted by this organ with one function of each.
14. Explain the need of chemical communication in multicellular organisms
15. . What are plant hormones? Name the plant hormones responsible for the following functions:
   a. growth of the stem b.promotes cell division c.wilting of leaves d.inhibits e.growth elongation of cell
16. Where are auxine synthesized in a plant?
   Which organ of the plant shows:
   (1) Positive phototropism (2)Negative geotropism (3)Positive hydrotropism

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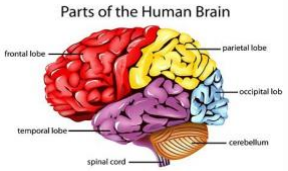

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17. **Name the hormone which is secreted when growing plants detect light. Mention its site of secretion in a plant.**

18. **Explain why do plants appear to bend towards light?**
    OrName a plant hormone responsible for bending of a shoot of a plant when it is exposed to unidirectional light. How does it promote phototropism?
19. **Name one plant hormone which inhibits growth. Write its one more function.**
20. **Explain how the movement of leaves of a sensitive plant is different from movement of shoots towards light?**
    Or, List two differences between the movement of leaves of a sensitive plant and the movement of a shoot towards light.
21. **Some plants like pea plants have tendrils which help them to climb up other plants, Explain how is it done. Name the plant hormone responsible for this movement**
22. **Name the phenomenon occurring in plants which are under the control of gravity, water and chemicals with one example each that shows the movement involved**
23. **Name the gland and the hormone secreted by the gland, which are associated with the following problems:**
    - **(i) a girl has grown extremely tall**
    - **(ii) a woman has a swollen neck**
24. **Name the diseases by which a person is likely to suffer due to the deficiency of:Iodine; Insulin**

(b) How the timing of secretion and amount of hormone secretion are regulated in human system. Explain with example.

25. **Compare and contrast nervous and hormonal mechanisms for control and coordination in the animals.**
26. **Mention three characteristic features of hormonal secretions in human beings**
27. **What is feedback mechanism of hormonic regulation? Take the example of insulin to explain this phenomenon.Or,**
    Explain feedback mechanism for regulation of hormonal secretion with the help of one example
28. **Name the hormone secreted in scary situations by animals. Write any three responses which enable the animal body to deal with it.**
29. **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.**
30. **Write the significance of peripheral nervous system in human beings.**
31. **How is human brain protected from mechanical injuries and shocks?**
    (a) In which region of the brain is (1) medulla and (2) cerebrum located ,State one function of each.
32. **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?**
33. **Define reflex action. With the help of a flow chart show the path of a reflex action such as sneezing**
34. **Compare and contrast nervous and hormonal mechanisms for control and coordination in the animals.**
35. **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**
36. **Mention three characteristic features of hormonal secretions in human beings**
37. **Name the hormone secreted in scary situations by animals. Write any three responses which enable the animal body to deal with it.**
38. **Write the name and location of a hormone which helps a person to respond when chased by a dog. Mention the responses in the body which help him to deal with the situation.**
    - **(i) How is human brain protected from mechanical injuries and shocks?**
    - **(ii) List two constituents of Central Nervous System (CNS). How are these components protected from injuries?**
    - **(iii) Write two limitations of the use of electrical impulses.**
    - **(iv) Write the significance of peripheral nervous system in human beings**

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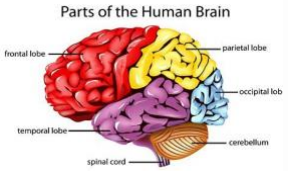

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Coordination in Plant

1. What is geotropism? Draw a labelled diagram of a potted plant showing positive geotropism[CBSE 2017-18
2.

(a) State the role performed by plant hormones. Name a plant hormone which is essential for cell division.
(b) Name and explain the role of plant hormone involved in phototropism. [CBSE 2017-18 C

3. If you keep the potted plant horizontally for 2-3 days, what type of movement would be exhibited by the shoot and root after two or three days?
4. In the absence of muscle cells, how do plant cells show movements
5. Name the plant growth hormone which is synthesized at shoot tip. Explain with the help of a diagram why does a plant bend towards light during growth
6. Give one example each of a plant hormone that:

(a) Promotes cell division (b) Promotes cell elongation (c) Promotes fruit ripening (d) Delays ageing(e) Causes wilting of leaves (f) Causes stem elongation.

7. Discuss how we receive a stimulus from our environment and show response towards it.
8. With the help of suitable examples explain the terms phototropism, geotropism and chemotropism
9. What are phytohormones ? List four types of phytohormones. Where are these synthesised?
10. What happens when a growing plant detects light? Explain in brief.
11. Explain giving reasons the bending of the shoot tip of a plant towards light source com one side of the plant.
12. Name one directional growth movement each in response to chemicals and water in plants. Write an example for each of them.
    (b) Name a hormone that promotes the growth of tendrils and explain how they help a pea plant to climb up other plants.
13. What are plant hormones? Name the plant hormones responsible for the following functions:
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19. Some plants like pea plants have tendrils which help them to climb up other plants, Explain how is it done. Name the plant hormone responsible for this movement
20. Name the phenomenon occurring in plants which are under the control of gravity, water and chemicals with one example each that shows the movement involved
21. How is the movement of leaves of a sensitive plant different from the downward movement of the roots?
22. Name one directional growth movement each in response to chemicals and water in plants. Write an example for each of them.
23. Name a hormone that promotes the growth of tendrils and explain how they help a pea plant to climb up other plants