



# BIOLOGY

## BOOKS - SUPER COMPANION MADE EASY

### CONTROL AND COORDINATION

#### Text Book Question

1. What is the difference between a reflex action and walking?



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2. What happens at the synapse between two neurons?



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3. Which part of the brain maintains posture and equilibrium of the body?



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4. How do we detect the smell of an agarbatti (incense stick)?



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5. What is the role of the brain in reflex action?



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6. What are plant hormones?



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7. How is the movement of leaves of a sensitive plant different from the movement of a shoot towards light?



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8. Give an example of a plant hormone that promotes growth.



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9. How do auxins promote the growth of a tendril around a support?



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10. Design an experiment to demonstrate hydrotropism.



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11. How does chemical coordination take place in animals?



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**12.** Why is the use of iodised salt advisable ?



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



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14. Why are some patients of diabetes treated b-y giving injections of insulin ?



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## Textbook Exercise Question

1. Which of the following is a plant hormone?

A. Insulin

B. Thyroxin

C. Oestrogen

D. Cytokinin

**Answer: D**



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2. The gap between two neurons is called a

A. Dendrite

B. Synapse

C. Axon



D. Impulse

**Answer: B**



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**3. The brain is responsible for**

A. Thinking

B. Regulating the heart beat

C. Balancing the body

D. All of the above

**Answer: D**



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4. What is the function of receptors in our body? Think of situations where receptors do not work properly. What problems are likely to arise?



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5. Draw the structure of a neuron and explain its function



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6. How does phototropism occur in plants ?



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7. Which signals will get disrupted in case of a spinal cord injury?



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8. How does chemical coordination occur in plants?



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9. What is the need for a system of control and coordination in an organism?



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**10.** How are involuntary actions and reflex actions different from each other?



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**11.** Compare and contrast nervous and hormonal mechanisms for control and coordination in animals



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12. What is the difference between the manner in which the movement takes place in a sensitive plant and the movement in our legs-?



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## Additional Question

1. Electrical impulse travels in a, neuron in the following manner:

A. Dendrite - Axon - axonal body - cell body

B. Cell body- dendrite - axon - axonal end

C. Dendrite - cell body- axon - axonal end

D. Axonal end- axon - cell body-dendrite

**Answer: C**



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2. In a neuron, conversion of- electrical signal to a chemical signal occurs at or in

A. Cell body

B. Axonal end

C. Dendrite end

D. Axon

**Answer: B**



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**3. Posture and balance of the body are controlled by**

A. Cerebrum



B. Cerebellum

C. Medulla

D. Pons

**Answer: B**



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4. Involuntary actions. in the body are controlled by

A. Medulla in forebrain

B. Medulla in mid brain

C. Medulla in hindbrain

D. Medulla in spinal cord

**Answer: C**



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5. Which of the following is not an involuntary action?

A. Vomitting

B. Salivation

C. Heart beat

D. Chewing

**Answer: D**



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**6. Spinal cord originates from**

A. cerebrum

B. Medulla

C. Pons

D. Cerebellum

**Answer: B**



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7. A doctor advised a person to take an injection of insulin because

A. His blood pressure was low

B. His heart beat was beating slowly

C. He was suffering from goitre

D. His sugar in blood was high

**Answer: D**



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**8.** The hormone which increases the fertility in males is called

A. Oestrogen

B. Testosterone

C. Insulin

D. Progesterone

**Answer: B**



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**9.** Which of the following endocrine glands is unpaired?

A. Adrenal

B. Testes

C. Pituitary

D. Ovary

**Answer: C**



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**10.** In humans, the life processes 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

**Answer: D**



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**11. Which of these plants responds to touch?**

A. Sun flower

B. Grass

C. Lotus



D. Mimosa

**Answer: D**



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**12.** Which part of the plant shows positively geotropic movement ?

A. leaf

B. root

C. stem

D. flower

**Answer: B**



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**13.** Which hormone is responsible for a plant part to bend towards light?

A. Auxin

B. Giberellin

C. Cytokinin

D. Abscissic acid

**Answer: A**



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**14.** Which of the following are growth promoter hormones in plants?

A. Auxin

B. Abscissic acid

C. Cytokinin

D. Auxin and cytokinin

**Answer: D**



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**15. Tropic movements are**

- A. In response to light
- B. in response to gravity
- C. non-directional
- D. unidirectional

**Answer: D**



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**16.** Which gland is also called the master gland

- A. Thyroid
- B. adrenal gland
- C. Pituitary gland
- D. Pineal gland

**Answer: C**



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17. Which of these acts both as an endocrine and exocrine gland?

A. Pancreas

B. Adrenal

C. Pituitary

D. Pineal

**Answer: A**



**18.** For the synthesis of which hormone, iodine is necessary

A. Auxin

B. Thyroxin

C. Insulin

D. Adrenaline

**Answer: B**



**19.** Diabetes is caused due to the deficiency of

- A. Insulin
- B. Thyroxin
- C. adrenaline
- D. Auxin

**Answer: A**



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## Short Question

1. What is neuron ?



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2. Give an example of a plant hormone that promotes growth.



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3. What part of the brain maintains posture and equilibrium of the body?



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4. Which parts of the body produce growth regulators?



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5. What is synapse ?



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**6.** List two functions performed by ovaries in a human female.



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**7.** What does a stem (or shoot) do in a response to light?



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**8. What is coordination in living things ?**



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**9. Mention the receptors of light and sound in animals.**



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**10. What are phytohormones ?**



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**11.** What are nastic movements in plants ? Give two examples



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## Long Question

**1.** Draw a human brain, label the parts and explain the functions of each part .



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2. What is a reflex arc? Explain how it carries the signals from receptor to effectors?



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3. What are animal hormones? Mention their characteristics. List the important hormones necessary for a healthy living



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4. How are brain and spinal cord protected from injuries?



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5. What is tropic movement? Give a small detail about the different tropic movements.



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**Higher Order Thinking Skills**

1. Adrenaline is called emergency hormone



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2. Secretions of growth hormones should be specific in the human body:



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3. Leaves drop off seasonally



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4. Endocrine glands release their secretions into the blood



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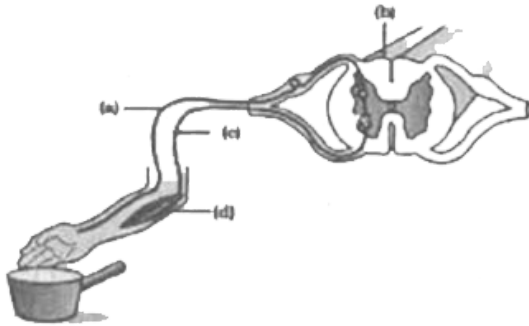
5. Differentiate between Cerebrum and Spinal cord



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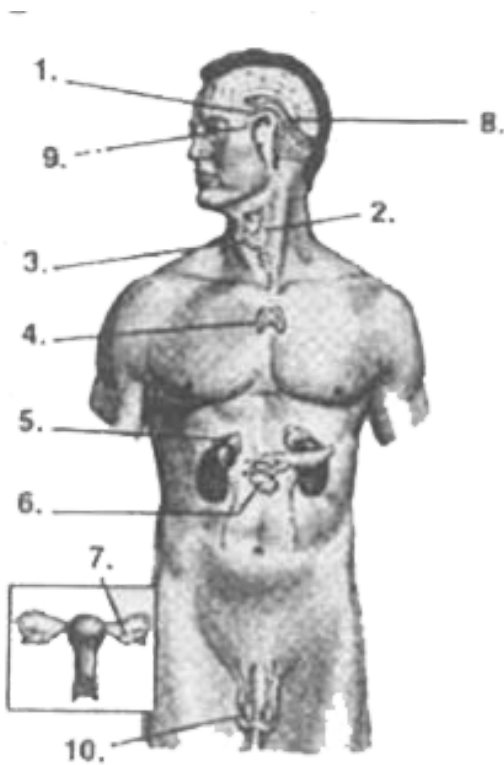
**Value Based Question**

1. Label the parts (a), (b), (c) and (d) and show the direction of flow of electrical signals in the following figure.



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## 2. Label the diagram



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3. Show an experiment to show that Auxin is a growth hormone (Control of plant growth by auxins)



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4. Show the effect of directional light on young grass seedlings by Charles Darwin and his son Francis



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5. Differentiate between Involuntary Action and Reflex Action.



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