



# BIOLOGY

## BOOKS - MBD NCERT SOLUTIONS

### CONTROL AND COORDINATION

#### Example

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? Name any two



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



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



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**9.** Give an example of a plant hormone that promotes growth.



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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 by giving injections of insulin?



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**15.** Which of the following is plant hormone?

A. insulin

B. thyroxin

C. oestrogen

D. cytokinin

**Answer:**



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**16.** The gap between two neurons is called a

A. dendrite

B. synapse

C. axon



D. impulse

**Answer:**



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**17.** The brain is responsible for

A. Thinking

B. regulating the heart beat

C. balancing

D. all of above

**Answer:**



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**18.** 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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**19.** Draw a labelled diagram of neuron and explain its function?



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**20.** Draw the structure of neuron and label the following on it,  
Nucleus, dendrite, cell body and axon.



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



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**22.** How does chemical co-ordination occur in plants?



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**23.** What is the need for a system of control and co-ordination in an organism?



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



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



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



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27. Describe the structure of spinal cord.



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28. What is reflex action? explain giving an example what is reflex are?



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29. List the components of nervous system what is a synapse? Explain what are its kinds.





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**30.** What are phytohormones? Classify the main groups



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**31.** Explain the following :Hydrotropism



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**32.** Explain the following:Thigmotropism



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**33.** Explain the following : Chemotropism



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**34.** Explain briefly the various types of plant movements.



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**35.** Describe various endocrine glands.



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**36.** What are hormones? Why are they called chemical messengers? What are the general properties of hormones?



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**37.** What is phototropism?



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**38.** Write differences between nastic and tropic movements



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**39.** Why is pituitary gland called master endocrine gland?



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**40.** Name one disorder each in case of less (hypo) or excess (hyper) secretion of insulin and thyroxine.



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**41.** List any four uses of auxins.



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**42.** What are the physiological effects of gibberellins?



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**43.** What are the functions of cytokinins?



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**44.** Write short notes on abscisic acid and ethylene





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**45.** Write functions of abscisic acid



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**46.** Write functions of ethylene



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**47.** What is chKHOotropism?





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**48.** Give examples of geotropism.



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**49.** Differentiate between hormones and enzymes.



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**50.** Briefly explain the autonomic nervous system.



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**51.** List different parts of the human nervous system.



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**52.** What is a nerve impulse ? Which structure in a neuron helps to conduct a nerve impulse (i) towards the cell body and (ii) away from the body ?



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**53.** What is a nerve impulse ? Which structure in a neuron helps to conduct a nerve impulse (i) towards the cell body and (ii) away from the body ?





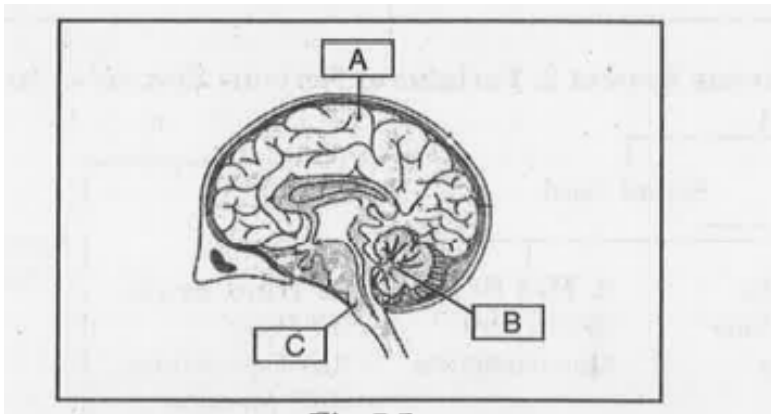
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54. Name the five major senses of man.



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55. Label the parts of human brain



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**56.** What is a gland? Name the two types of glands



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**57.** How does our body maintain blood sugar level?



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**58.** Why is pancreas a dual gland?



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**59.** List the functions of testosterone and estrogen.



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**60.** Name the hormones which stimulate the testes?



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**61.** List some of the functions of adrenal glands



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**62.** Write a note on turgor movements.



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**63.** Mechanism of movements shown by mimosa pudica, if touched.



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**64.** How do phototropism differ from geotropism?



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**65.** List the major endocrine glands and state their position in the human body.



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**66.** Nervous and hormonal systems together perform the function of control and coordination in human beings.' Justify the statement.

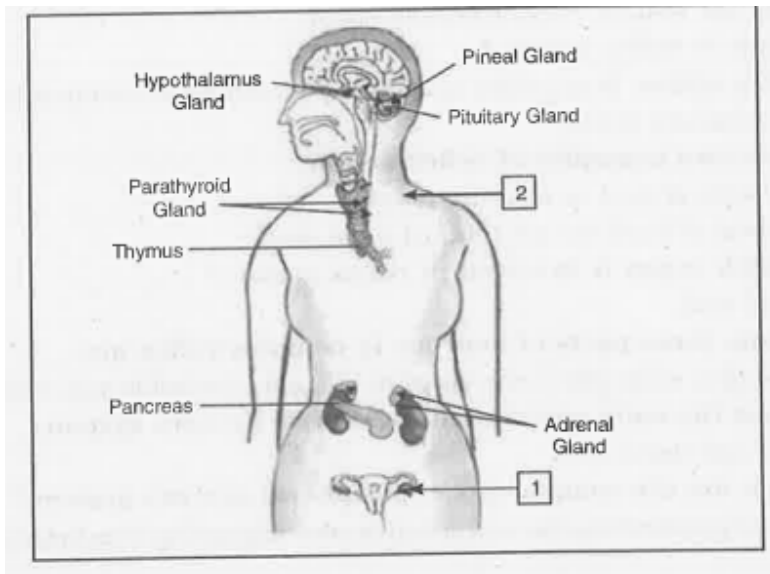


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67. What are the general functions of hormones?

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68. Label 1 and 2 in the figure given below:



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**69.** Are movements in living organisms a characteristic of life?



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**70.** Movements in plants are due to result of which kind of action?



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**71.** Crying, respiration and voluntary movements are linked to which category.



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**72.** Name the structural and functional unit of nervous system.



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**73.** What is the function of dendrites?



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74. Name the structure of neuron which conduct impulse.



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75. Name the sites where electrical impulses are conducted into chemical impulses



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**76.** What is a neuron?



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**77.** What is synaptic cleft?



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**78.** Mention the receptors for light and sound  
in animals



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**79.** What is reflex action? explain giving an example what is reflex are?



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**80.** Give two examples of reflex action



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**81.** Which organ is involved in reflex action?





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**82.** Name three parts of neurons in complex reflex arc.



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**83.** Name the three main parts of brain



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**84.** List three involuntary actions



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**85.** Involuntary actions are controlled by which part of brain



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**86.** Cycling, walking along a straight path and picking up of pencil are controlled by which

part of brain



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**87.** Name the part of brain which control balancing and voluntary movements of body.



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**88.** What is the function of cerebro spinal fluid?



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**89.** Name the structure which protects spinal cord.



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**90.** How does plant cell change its shape?



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**91.** What is the function of tendrill.



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**92.** Name the hormone which help in cell division.



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**93.** Name the hormone secreted by adernal gland.



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**94.** Where is thyroxine hormone secreted?



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**95.** Name the hormone which plays role in metabolism of carbo-hydrates, proteins and fats?



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**96.** Name the gland which secreted growth hormone?



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**97.** Name the hormones which play role in maturity during adolescence in boys and girls?



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**98.** Where is insulin secreted?



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**99.** What is the main element of thyroxine hormone?



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**100.** What is the main element of the vasopressin hormone?



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**101.** Write the function of hormone thyroxine

In our body?



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**102.** Which two systems of body work together for control and coordination of body parts?



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



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**104.** Define endocrine gland



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**105.** Name the hormone which increases blood pressure and rate of heart beat.



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**106.** Name the female sex hormones



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**107.** Name the following : The cause of diabetes mellitus





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**108.** Name the following: The two portions of adrenal gland.



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**109.** Name the following : The gland which function actively in emergency situations



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**110.** Name the following: The hormone of pituitary that helps in child birth



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**111.** Name the following: The endocrine gland located on the top of kidneys?



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**112.** Name the following : The gland which secretes insulin



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**113.** Name the following : The hormone which prepares the body to meet any emergency situation



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**114.** Name the following : An example of the disease caused due to insufficient secretion of hormone



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**115.** Name the following : The gland, which produces the so called 'emergency hormone'.



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**116.** Name the following : Carrier of hormones from the gland to target organ.



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**117.** Name the following : The hormone which controls (i.e. reduces) the level of sugar in blood, and the gland which secretes it.



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**118.** Name the three parts fo a neuron.



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**119.** What happens when bright light is focussed on eyes?



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**120.** Where are receptors located in the body?



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**121.** What is the function of gustatory receptors?



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**122.** Name the organs concerned with sense of smell.



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**123.** Which part of plant bends towards light?



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**124.** Name the largest cell present in the human body.



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**125.** What are the three basic regions of the brain?





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**126.** Which part of the brain controls the heart ?



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**127.** Name the following: Structural and functional units of the nervous system



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**128.** Name the following : Two type of peripheral nerves.



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**129.** Name the following : Most important part of the nervous system.



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**130.** Name the following : Three divisions of human brain.



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**131.** Name the following : Largest part of the brain.



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**132.** Name the following : Two types of matter present in brain and spinal cord.



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**133.** How many hormones are secreted by pituitary gland?



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**134.** Which of the following is not a plant hormone?

A.  $GA_3$

B. ethylene

C. Phytochrome

D. auxins

**Answer:**



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**135.** Cytokinins stimulate the cell for:

A. turgor

B. elongation

C. cell division

D. wall thickening

**Answer:**



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**136.** Movement in the leaf of the touch-me-not (mimosa) plant is:

- A. epinasty
- B. hyponasty
- C. Nyctinasty
- D. siesmonasty

**Answer:**



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**137.** Hydrotropism is response towards:

A. light

B. touch

C. gravity

D. water

**Answer:**



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**138.** The reflex action is



- A. blinking of eyelid
- B. swallowing of food bolus
- C. sneezing and coughing
- D. all the above

**Answer:**



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**139.** Nerve fibres transmit the nerve message  
by means of:

A. chemical

B. physical

C. electrochemical

D. electrical

**Answer:**



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**140.** Brain and spinal cord act as:

A. receptors

B. effectors

C. modulators

D. none of these

**Answer:**



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**141.** Which of the following is not a structure  
In the hind brain?

A. medulla oblongata

B. thalamus

C. cerebellum

D. pons

**Answer:**



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**142.** Which one of the following endocrine gland produces two distinct hormones?

A. adrenal

B. thymus

C. testis

D. pineal

**Answer:**



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**143.** Fill in the blanks: The nervous system uses.....impulses to transmit messages



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**144.** Fill in the blanks: .....is the main co-ordinating centre in the body.



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**145.** Fill in the blanks: The movement of a part of a plant in response to light is called .....



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**146.** Fill in the blanks: Endocrine glands secrete.....into blood.



**Watch Video Solution**

**147.** Fill in the blanks: Insulin hormone is secreted by.....



**Watch Video Solution**

**148.** Fill in the blanks: Auxins play role in cell..... .



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**149.** Fill in the blanks: In human there are .....pairs of cranial nerves.



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**150.** Fill in the blanks: .....is the junction between two adjacent neurons



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