



### **BIOLOGY**

# **NCERT - NCERT BIOLOGY(TELUGU)**

# COORDINATION



**1.** Do you think body's team work maintains functioning of our body ? Justify your answer with an example.



**2.** Given an example of coordination in your body where both hormonal and nervous controls function together.



**3.** Consider that you are passing by a garbage disposal area and you immediately cover your nose. Arrange the events belown in a logical

order by marking them from (i) to (v) to trace the events that happen in the nervous system from detection of foul smell (stimulus generation) to covering your nose (response). (i) At the end of the axon, electrical impulse releases chemicals. (ii) Stimulus received by the dendritic cells of a neuron sets off chemical reaction that creates

an electrical impulse.

(iii) Electrical impulse transmitted through cell body and axon.

(iv) The chemicals cross the synapse and reach the next neuron. Similarly, the electrical

impulse crosses several neurons.

(v) Finally, the impulse is delivered from neuron to the gland that helps in recognition of the foul smell and muscle cells that help in covering the nose.

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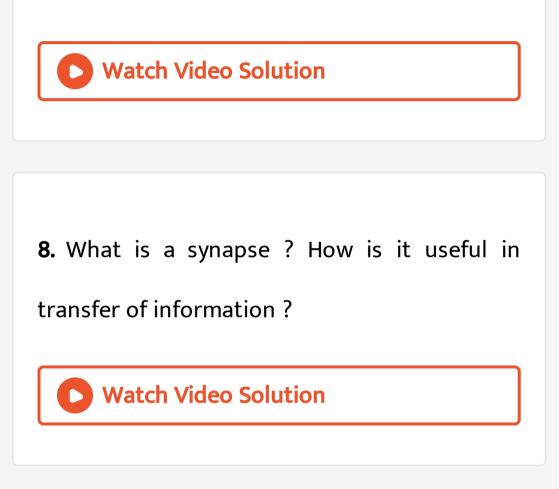
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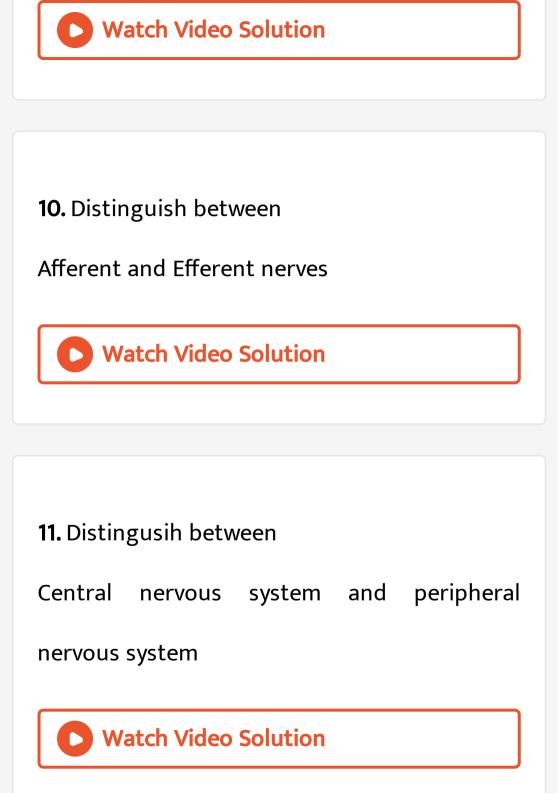
of the foul smell and muscle cells that help in

covering the nose.



9. Distinguish between

Stimulus and Response



12. Distinguish between

Receptor and effector

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**13.** How does Phototropism occur in plants?

14. Give an example and explain how plants

may immediately respond to a stimulus.

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15. Suggest an experiment to show how roots

grow away from light in most plants.



**16.** I am a human hormone. I am secreted from a gland near to neck. I influence general growth rate and metabolic activity in our body. Who am I ?

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17. How does a neuron differ from an ordinary

cell in structure ? Write notes.

18. Is the structure of neuron suitable for

transmission of impulses ? Analyse.



**19.** Man is the most intelligent animal. What could be the fact that helped us to reach such a conclusion?

**20.** The axon of nerve cell in hand is shorter than the axon of nerve cell in leg. Do you support this statement ? Why?



#### 21. Organs respond to the external stimulus by

a fraction of second. How do you feel about

such controlling mechanism of human body?

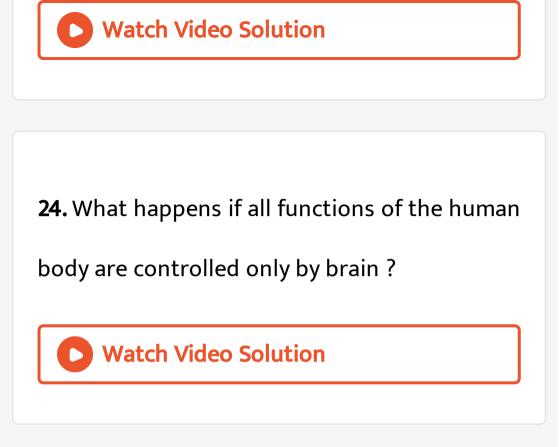


**22.** State whether the following actions are voluntary action, reflex action or conditioned reflex.

i) Blinking ii) Cleaning the table iii) Playing on the keyboard iv) Salivating when food is put in the mouth v) We close our ears when we hear unbearable sound.

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**23.** What will happen to the potted plant kept near window in the room ?



# **25.** If you visit a doctor, what doubts you would like to clarify about pancreas ?

**26.** Take a small potted plant. Cover base portion of the plant tightly and hang the pot upside down. Observe the plant for a week. Based on your observation how can you support phototropism.

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**27.** Take a cock feather. Touch smoothly at different parts of your body. Find out which portion of the body has high sensation. Is this smallar during sleeping? Prepare a report?



**28.** What procedure do you follow to understand the effect of plant growth hormones (in agar medium) in the terminal portion of the tip of stem (coleoptile) ?

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**29.** Collect information on the actions controlled by spinal cord by using reference

books from your school library.



**30.** Read the following sentences and compare with endocrine glands.

Pheromones are chemical substances secreted by organisms. These act as chemical signals secreted by exocrine glands. Pheromones are used as signals by the members of same species. Honeybee secretes pheromones that attract other bees to the location of food.





**31.** Collect the information about cranial nerves, spinal nerves from internet or from your school library.

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**32.** Draw a picture representing connection between dendrite - dendrite, axon-dendrite. Why do they connect like that ?

33. Draw neatly labelled diagram of Brain and

write few points how it is protected.

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**34.** You are walking in the traffic. Suddenly you heard a loud sound. How does coordination take place in this situation among respected organs ? Draw a block diagram to explain this situation.



**35.** Make a model of neuron using suitable materials.

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**36.** Draw the labelled diagram of brain.

**37.** Observe different actions performed by your classmate for a period of 45 minutes. Out of these actions which are contolled by voluntary and involuntary pathways?

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**38.** Its very interesting to watch a creeper entwining its tendril to the support. Is not it ? How do you express your feelings in this situation ?



39. Hormones are released at a specific place,

specific time for a specific function. Prepare a

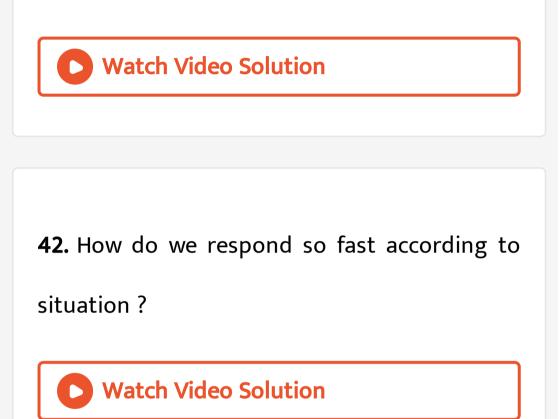
cartoon on hormones with a nice caption.

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40. What other functions do you think needed

in coordination and balance?

41. What triggers movement of the muscles?



**43.** What helps us to respond to such signals ?

### 44. Why does the living body respond to such

signals ?



# **45.** Why do you think Galen drew such a conclusion ?

46. Which organ of our body was the detector

and which the effector to Activity -1?

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47. What do you think that the information

carried on the afferent and efferent nerves ?

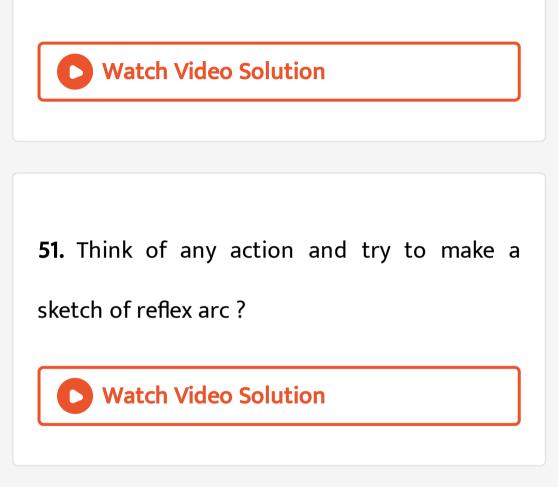
**48.** Do you think most of the functions in our body go about in an involuntary manner? Why? Why not?



#### 49. What other effectors would act under

these circumstances?

50. What are association nerves?



**52.** According to you what would be the function of the spinal cord ?



**53.** Are all functions of our body under direct control of the brain and spinal cord ? What do you think So?

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54. Which root according to you get signals

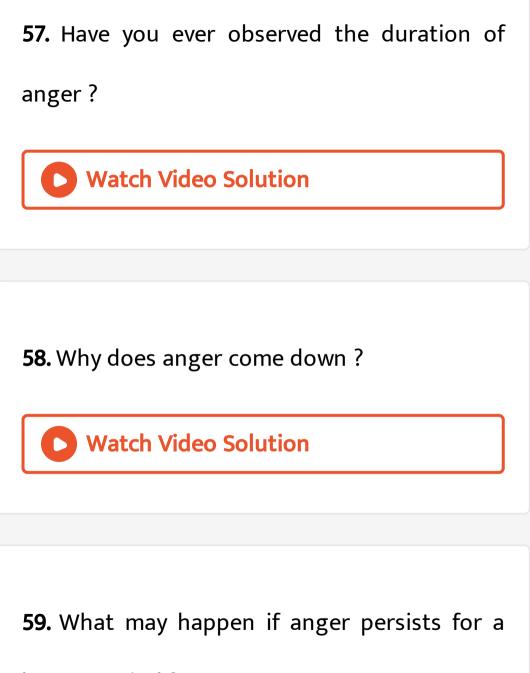
from afferent nerves ?

55. What do you think the end of these nerves

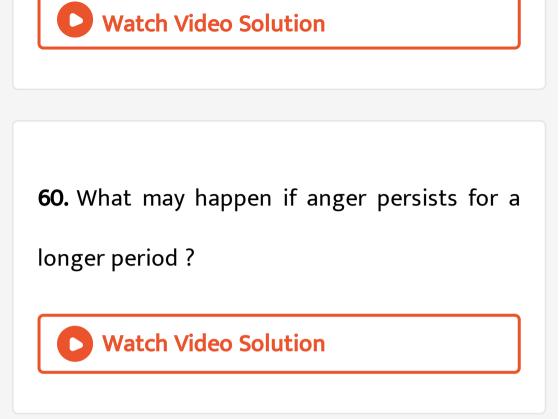
act at the muscular end?

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**56.** What will you do if a dog is after you? What will be your first reaction? Have you ever observed any change in your body when you afe afraid?



longer period ?



**61.** Observe the permanent slide of nerve cell or neuron under microscope and try to find out its parts. Compare with the following diagram.



**62.** Observe the permanent slide of nerve cell or neuron under microscope and try to find out its parts. Compare with the following diagram.



64. What do we cell the action of kicking a football?

**65.** What experimental procedure will you follow to prove phototropism and geotropism

in germinating seeds ?

66. How many types of nerves are there ? What

are they ?

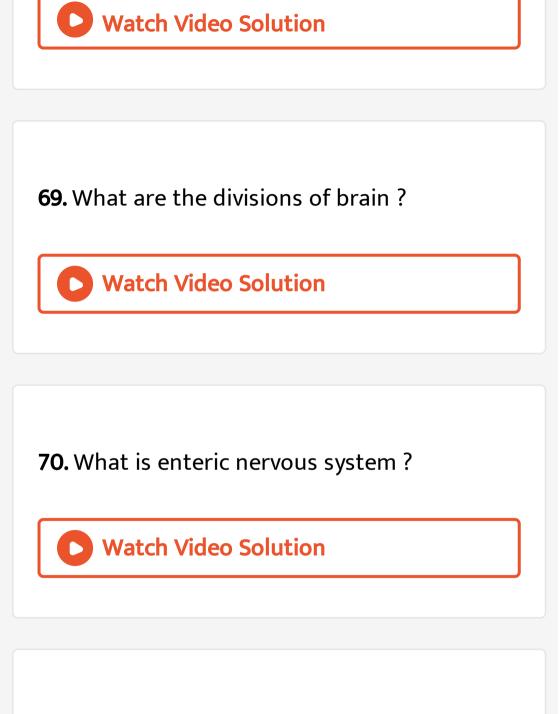


67. What is a Reflex arc?

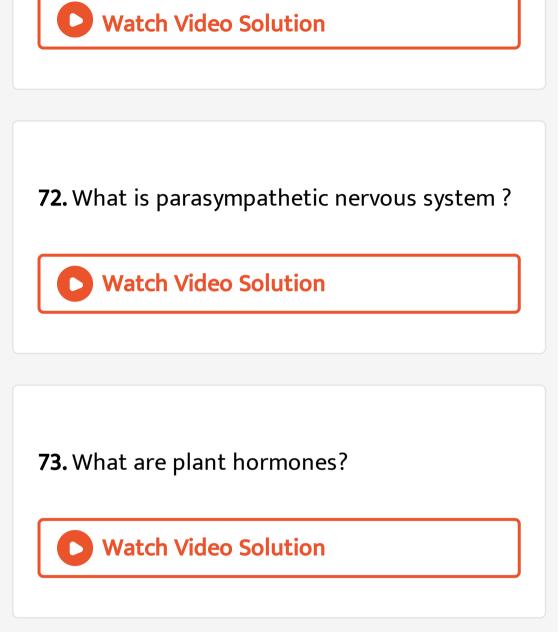
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68. What are components of central nervous

system?

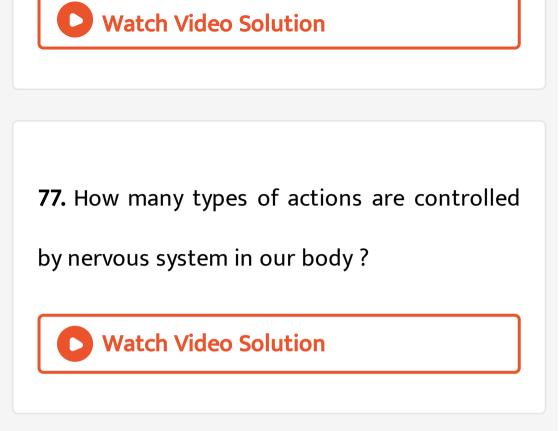


71. What is sympathetic nervous system?



74. What are voluntary actions ? Give examples. Watch Video Solution 75. What are involuntary actions ? Give examples. Watch Video Solution

**76.** How do reflexes take place in our body ?



78. How many types of nerves are there ? What

are they ?

79. What is the reaction of the body when we

step on a sharp edged object ?



# 80. Why is a system of control and

coordination essential in living organisms ?

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81. Prolonged hyperglycemia leads to





82. What will happen when plant is exposed to

unidirectional light ?

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**83.** A part of the hind brain makes possible activities like walking, skating, riding a bicycle and picking up a pencil. Name this part

**84.** The neck of a person appears to be swollen. a) Name the disease the person is suffering from.



**85.** The neck of a person appears to be swollen. a) Name the disease the person is suffering from.



86. Name the plant hormone which inhibits

growth and causes wilting of leaves.



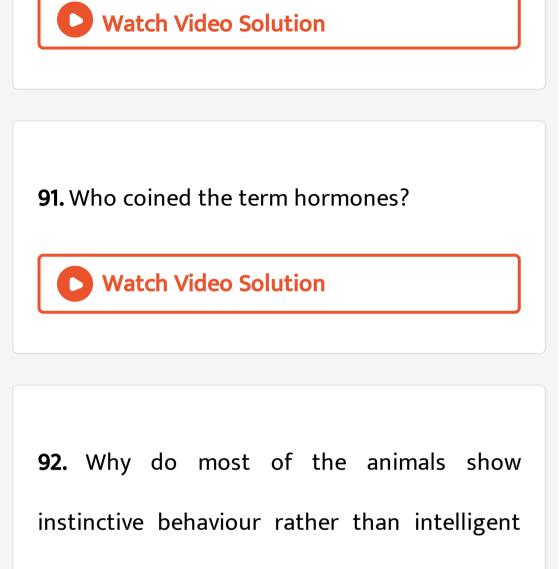
**87.** Taking the example of heart beat, justify the antagonistic (opposite) action of the sympathetic and parasympathetic nerves.

88. Name the part of neuron where information is acquired.
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**89.** Who transmits nerve impulse across the synapse ?

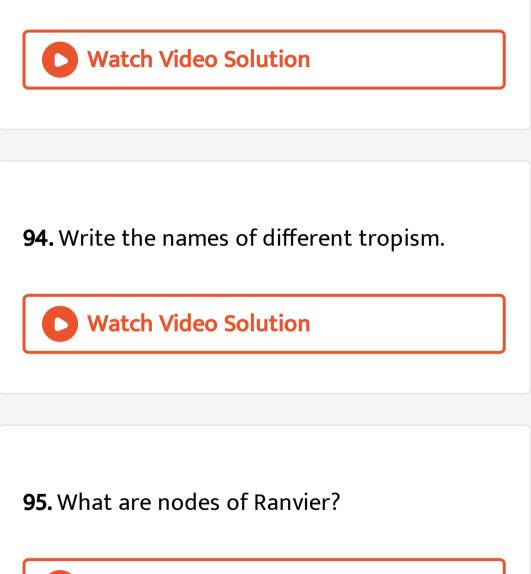


**90.** Why do leaves drop off seasonally?



behaviour?

## **93.** What is hydrotropism?



## **96.** Write briefly on axon?



**97.** Write the equation for the chemical decomposition reaction of silver chloride in the presence of sunlight.

**98.** 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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99. Which signals will get disrupted in case of

a spinal cord injury?

100. Which chemical substance is used to

obtain seedless fruits?



101. What happens if we cut the tip region of a

branch of a plant? What is the reason for it?

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**102.** What is abscission?





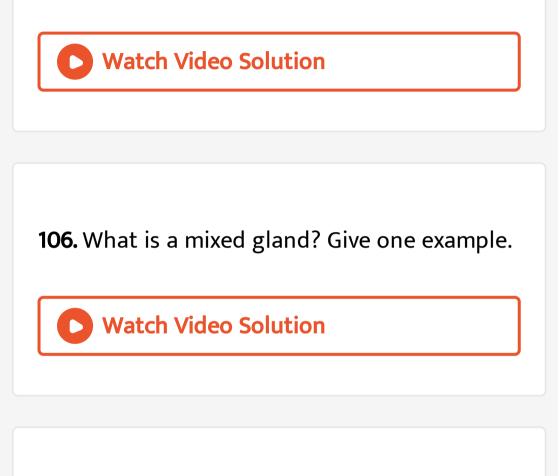
103. How can you prove that plants show

phototropism?

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104. Name the auxin which acts as weedicide

105. What is target tissue?

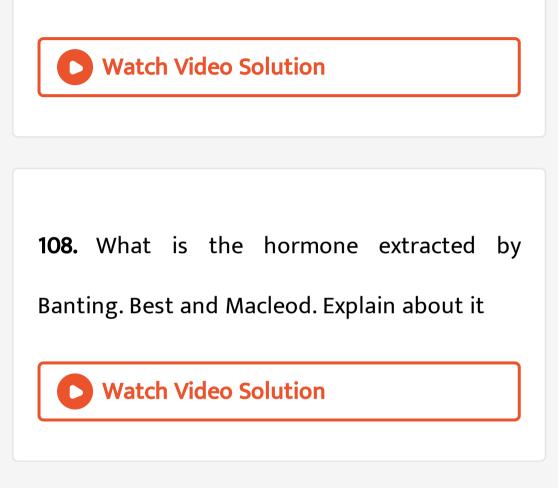


**107.** Read the following sentences :

P. Insulin secreted by Islets of Langerhans.

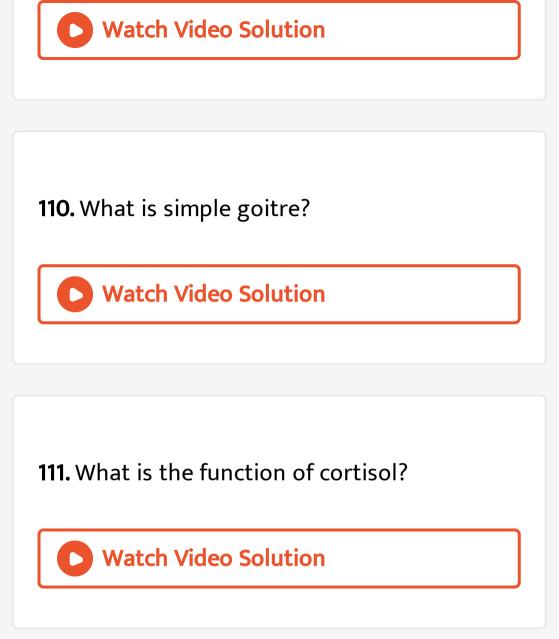
Q. The deficiency of insulin leads to diabetes .

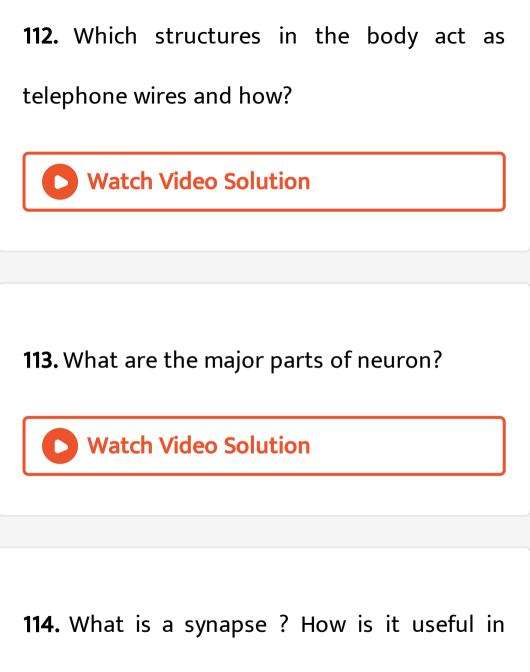
Which of the above statements are correct?



109. Which hormone is called "flight or Flight"

hormones?





transfer of information ?

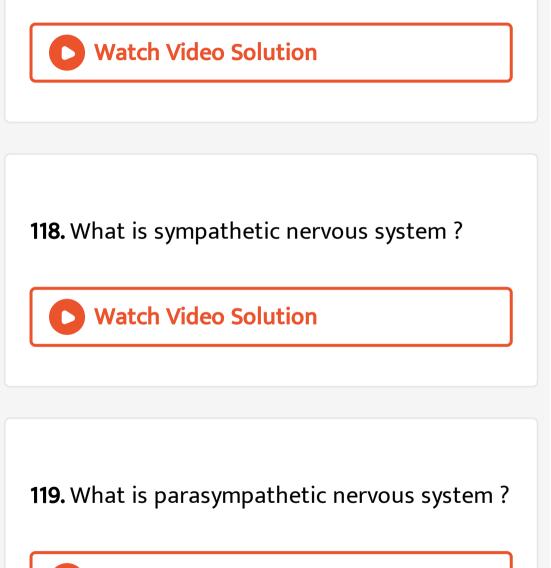


**115.** Explain two tropic movements with suitable examples.

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**116.** What is the weight of the brain?

117. Who coined the term hormones?

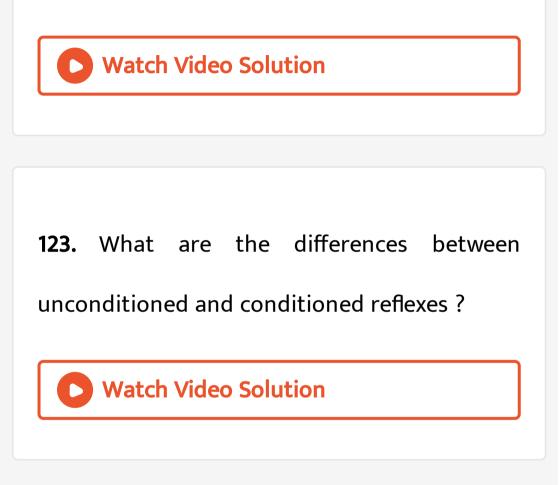


**120.** A farmer arranged support form cucumber plants. So that they creep and grow in a normal conditions. What type of nastic movement is shown in by cucumber?

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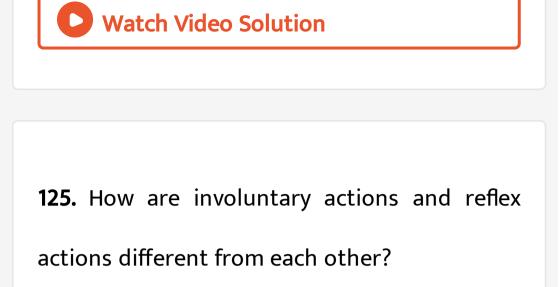
**121.** Oesteocytes : bone , glial cells : ?

**122.** What is "action potential"?



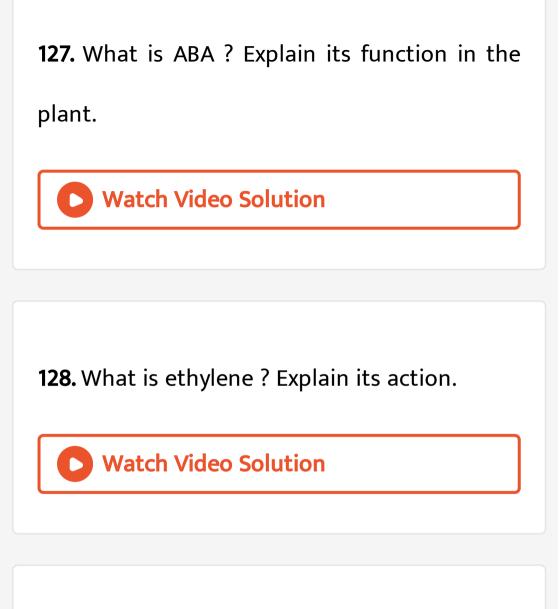
124. Write the components of reflex arc and

thheir functions.



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

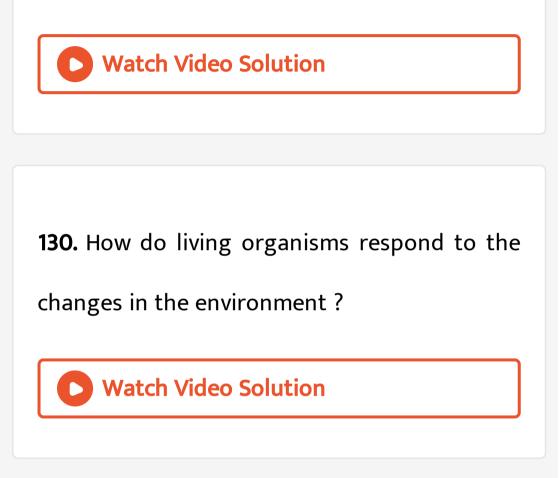


129. Identify the mis-matched pair.

1) Auxins - Apical dominance

2) Cytokinins - Ripening of Fruits

3) Abscisic acid - Closing of stomata



131. What is simple goitre?

132. What will happen if intake of iodine in our

diet is low?



#### 133. How does our body maintain blood sugar

level ?

134. Why are some patients of diabetes treated by giving injections of insulin ?
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**135.** On touching a hot plate you suddenly withdraw your hand. Which category of neurons become active first and which are next ?



**136.** What will happen if a plant is placed near the window of your classroom ? What is this process called as ?

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137. Give a reason to explain why adrenaline

helps in dealing emergency situations.

138. What is the difference between a reflex

action and walking ?

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#### 139. How does chemical coordination occur in

plants?



140. Explain some major plant hormones and

their functions in a tabular form.

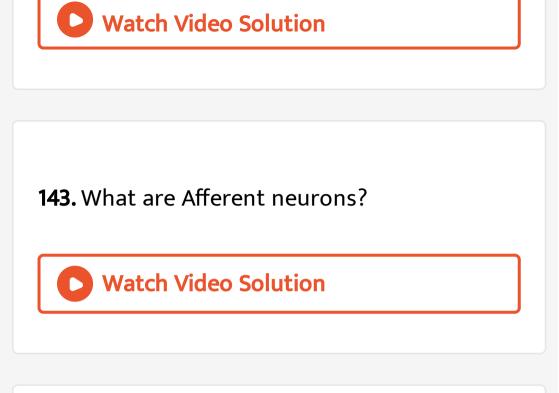


141. Write the differences between Gibberellins

and Abscisic acid



142. What is chemotropism?



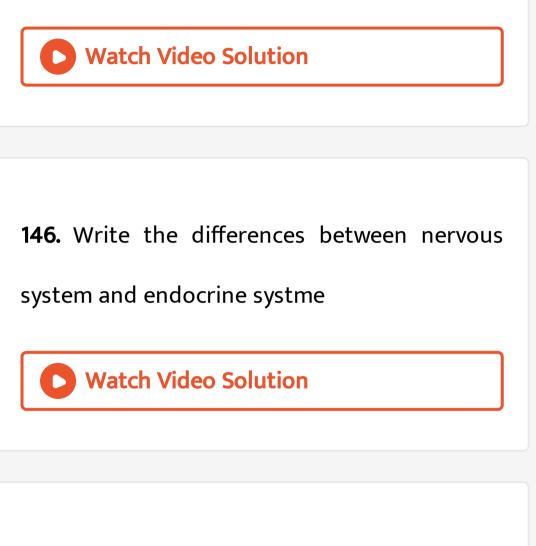
144. Write the functions of Spinal cord from

the information collected from your school

library and from internet.



**145.** Describe the structure of brain.



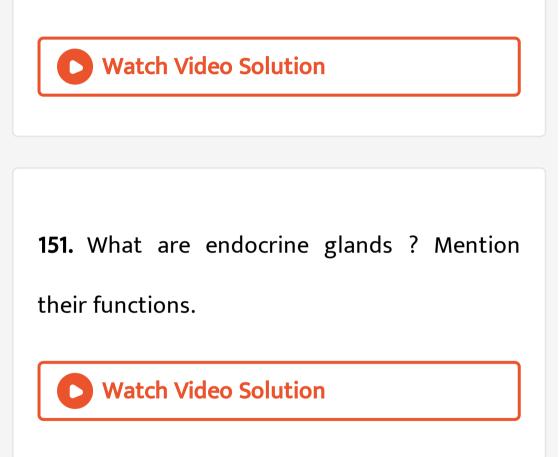
147. What is feedback mechanism?

**148.** Write brief notes on Ivan Pavlov's experiment on dog to demonstrate conditioned reflexes.

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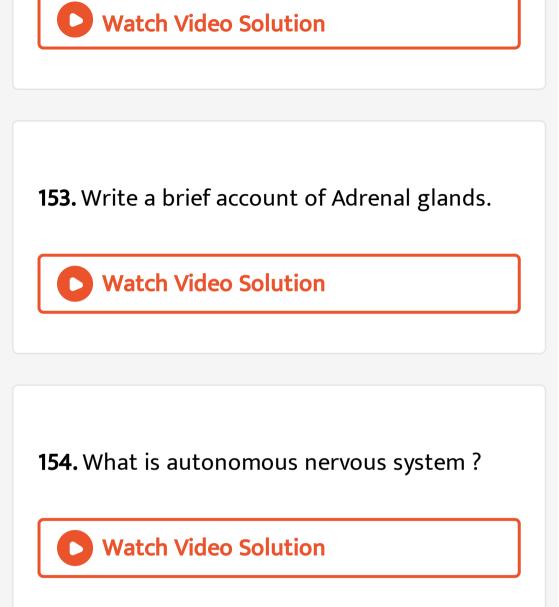
149. Describe the structure of brain.

**150.** Describe the structure of spinal cord.



152. The posterior pituitary gland is not a true

endocrine gland because



155. Draw a block diagram of different nerve

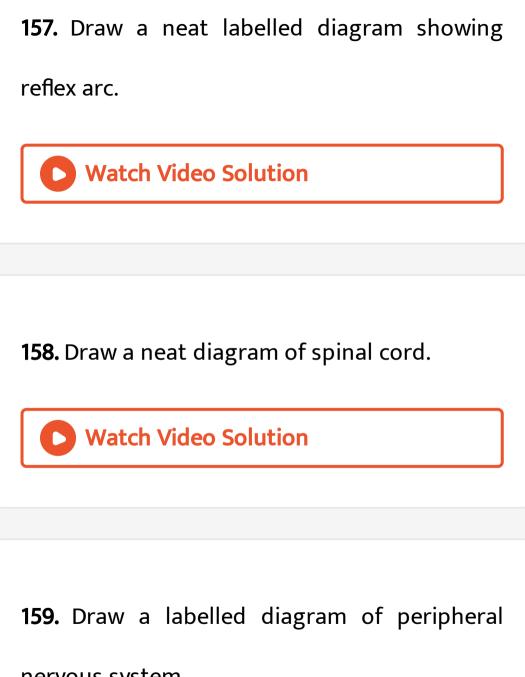
pathways.

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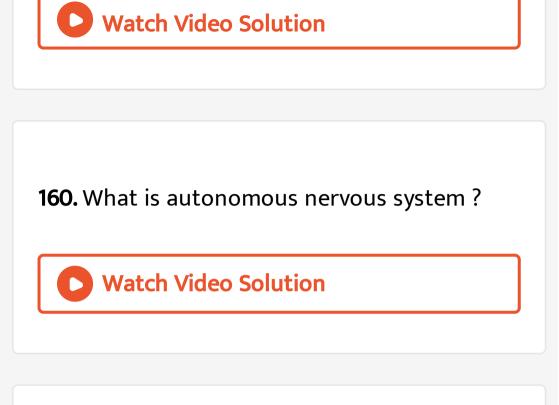
156. Draw the neat diagrams of motor nerve

and the Sensory nerve.





nervous system.



# **161.** Which is not correct pair?

A. Adrenaline - pituitary

B. Testosterone - testes

C. Ovary - estrogen

D. Somatotrophin – pituitary

## Answer:

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162. Nerve is a

- A. Plasma lemma
- B. Neuro lemma
- C. Grey mater
- D. White mater





**163.** Oesteocytes : bone , glial cells : ?

A. Pia matter

- B. Dura matter
- C. Arachnoid membrane
- D. Grey matter

Answer:



# **164.** What is the total number pairs of peripheral nerves in man ?

- A. 41
- B.42
- C. 43
- D. 44

## **Answer:**





# 165. Nerves are classified into how many

different types?

A. Axons

B. Cytons

C. Dendrites

D. None

#### Answer:

**166.** Name the master gland of the body.

A. Adrenal

B. Thyroid

C. Parathyroid

D. Pituitary

## Answer:

167. Name the endocrine gland which is very

near to trachea ?

A. Pancreas

B. Liver

C. Thyroid

D. Adrenal

Answer:

168. How many Islets of Langerhans are

present in normal human pancreas?

A. Kidney

B. Liver

C. Pancreas

D. Trachea

Answer:

169. Chemical cordination is brought about by

A. blood

B. lymph

C. enzymes

D. hormones

Answer:

170. Name the endocrine gland that is present

in the head.

A. Adrenal

B. Thyroid

C. Pituitary

D. Parathyroid

## Answer:

171. Arrange the following in correct sequence

from root tip.

- A) Region of maturation
- B) Region of meristematic activity
- C) Region of elongation
- D) Root hair zone
  - A. above the tip
  - B. below the tip
  - C. in between nodes
  - D. lower part of stem





# 172. Auxins in plants are synthesised at

A. nodes

B. petiole

C. meristems

D. internodes





# 173. Water loss from plants is prevented by a

## hormone

A. GA

B. NAA

C. IAA

D. ABA

## **Answer:**





174. Indole acetic acid is

A. Gibberellin

B. Auxin

C. Cytokinins

D. 0.05

## **Answer:**

175. What is the weight of the brain?

A. 0.02

B. 0.03

C. 0.04

D. Abscisic acid

#### **Answer:**



**176.** The peripheral nervous system that controls invoulantory actions is called

A. medulla oblongata

B. cerebellum

C. hypothalamus

D. spinal cord

# Answer:

177. How many types of actions are controlled

by nervous system in our body?

A. Cerebrum

B. cerebellum

C. spinal cord

D. medulla oblongata

Answer:

**178.** How many pairs of cranial nerves are mixed nerves?

A. 10 pairs

B. 15 pairs

C. 12 pairs

D. 31 pairs

## **Answer:**

179. What is the weight of the brain?

# A. 1400 g

- B. 1450 g
- C. 1500 g
- D. 1550 g

#### **Answer:**



A. 
$$95\frac{m}{s}$$
  
B.  $100\frac{m}{s}$   
C.  $150\frac{m}{s}$   
D.  $110\frac{m}{s}$ 

#### Answer:

181. The surface are of cerebrum is increased

by

A. axons

B. dendrites

C. myelin sheath

D. gyri

## Answer:

182. The part of the neuron which is generally

called as nerve fibre is

A. dendrites

B. myelin sheath

C. axon

D. cyton

Answer:

183. Distinguish between

Afferent and Efferent nerves

A. sensory nerves

B. motor nerves

C. mixed nerves

D. none

#### Answer:

**184.** Afferent neurons carry impulses from \_

to\_

A. dendrites

B. motor nerves

C. efferent nerves

D. afferent nerves

Answer:

185. Gaps in the axons are called

A. pits

B. pores

C. nodes

D. nodes of ranvier

Answer:

186. What is the weight of the brain?

A. 400 gms

B. 450 gms

C. 500 gms

D. 550 gms

Answer:

187. What are components of central nervous

system?

A. sensory

B. motor

C. afferent

D. association

#### **Answer:**

188. Who transmits nerve impulse across the

synapse?

A. calcium ions

B. schwann cells

C. neurotransmitters

D. all the above

Answer:

189. How does plant respond to sunlight?

A. mango

B. sunflower

C. eucalyptus

D. cashew nut

Answer:

**190.** The plant part which exhibit negative geotropism is

A. stem

B. root

C. leaf

D. flower

## Answer:

**191.** Name the part of the plant which is negatively phototropic and positively geotropic.

A. stem

B. root

C. leaf

D. flower

Answer:

192. How does opening and closing of stomata

take place?

A. abscissic acid

B. auxin

C. gibberellins

D. ethylene

Answer:

193. Name the phytohormone that promotes

cell division.

A. auxin

B. gibberellins

C. cytokinins

D. abscissic acid

#### **Answer:**

## 194. Elongation of bone occurs due to

A. abscissic acid

B. auxin

C. ethylene

D. gibberellins

Answer:



195. Estrogen is responsible for

- A. opening of stomata
- B. ripening of fruits
- C. breaking seed dormancy
- D. stimulation of flowering

### Answer:



**196.** Which of the following phytohormone is not associated with the promotion of growth in plants?

A. auxin

- B. abscissic acid
- C. gibberellins
- D. cytokinins

#### **Answer:**

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# **197.** Which of the following is a plant hormone?

A. auxin

B. ascorbic acid

C. cytokinins

D. ethylene

#### **Answer:**

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198. How does Phototropism occur in plants?

A. cytokinins

- B. gibberellins
- C. auxin
- D. abscissic acid

## Answer:

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## **199.** Abscissic acid is responsible for

A. cell elongation

B. promote cell division

C. promotes fall of mature leaves and fruits

D. elongation of stems

Answer:

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200. Hydrotropism means

A. it is the movement of root towards

water

B. movement of stem towards water

C. bending of stem towards light

D. growing of root into the soil

### **Answer:**



## 201. The entry of pollen tube into the ovule

through micropyle is called

A. geotropism

B. hydrotropism

C. phototropism

D. chemotropism

## Answer:



202. With what name growing of plant tendrils

towards support and wind around is ?

A. phototropism

B. thigmo tropism

C. chemotropism

D. geotropism

## Answer:

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**203.** Folding up of leaves of mimosa pudica when we touch it. This type of response is called

A. thigmonasty

- B. phototropism
- C. geotropism
- D. negatively phototropic

## Answer:

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## **204.** Name the digestive gland which act as exocrine as well as endocrine.

A. thyroid

B. parathyroid

C. pancreas

D. liver

## Answer:

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# **205.** What is the total number pairs of peripheral nerves in man ?

B. 43

C. 12

D. 33

#### Answer:

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## 206. lodine is necessary for the production of

this hormone

A. adrenaline

B. thyroxine

C. paratharmone

D. somatotoxin

Answer:

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207. The gland attached to kidney is

A. thyroid

B. hypothalamus

C. pituitary

D. adrenal

## Answer:



## 208. Secretion of aldosterone is under the

control of

A. progesterone

B. estrogen

C. thyroxine

D. adrenalin

## Answer:



**209.** The menstrual cycle prepares the uterus for a fertilised egg. How long is an average menstrual cycle from start to finish ?

A. 29 days

B. 27 days

C. 28 days

D. 30 days

### Answer:

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210. Select the right match of endocrine gland

and their hormone among the options given

below.

A)Pineal I)Epinephrine

B)Thyroid II) Melatonin

C)Ovary III)Estrogen

D)Adrenal medulla IV)Tetraiodothyronine

A. somatotoxin

B. thyrotrophine

C. gonadotrophine

D. luteinizing hormone

### Answer:

**211.** What serves as a shock absorbing medium and protect the brain against shocks and jerks ?

A. cerebrospinal fluid

B. meninges

C. cranium

D. all the above

## Answer:

A. cerebrum

B. cerebellum

C. medulla oblongata

D. pons varoli

## Answer:

213. A point of contact between two neurons is

A. nerve ending

B. dendrite

. . . . . . . . . .

C. synapse

D. axon

**Answer:** 

**214.** Which hormone is responsible for cell elongation and differentiation of shoots and leaves ?

A. cell elongation

B. differentiation of shoots, roots

C. both A and B

D. elongation of stems

## Answer:

**215.** Thyroxine is responsible for .....

- A. general growth rate and metabolic activity
- B. growth of bones and testis
- C. growth of the uterus and skeleton of the

pelvis

D. growth of testis and uterus

Answer:



**216.** A gardener wants large dehlia. Which plant hormone should he use along with nutrients?

A. auxin

B. gibberellins

C. cytokinins

D. ethylene

Answer:

**217.** b) In a dwarf plant the branches have to be thickened one would use ...... Hormone.

A. gibberellin

B. auxin

C. cytokinins

D. abscissic acid

Answer:

218. Which hormone is helpful to store seeds

for a longes time ?

A. auxin

B. gibberellins

C. abscissic acid

D. ethylene

#### Answer:

**219.** d) Cutting the apex or tip of plants so that there are several lateral buds ...... Hormone can be used.

A. auxin

B. gibberellins

C. cytokinins

D. ethylene

## Answer:

220. e) The part of the brain that helps you in

solving puzzles is .....

A. cerebrum

B. cerebellum

C. diencephalon

D. pons varoli

#### Answer:

## 221. In a nerve cell nucleus is present in

A. cell body

B. axon

C. dendrite

D. nerve ending

**Answer:** 

222. The existence of the knee jerk was first

noted in

A. 1870

B. 1877

C. 1975

D. 1856

#### **Answer:**

223. Distingusih between Central nervous system and peripheral nervous system

A. brain, peripheral parts of spinal cord

B. brain, spinal cord

C. dorsal root ganglion, ventral root

ganglion

D. cerebrum, cerebellum

Answer:

**224.** Brain is protected by having protective membranes. Name them.

A. pleura

B. medulla

C. meninges

D. white matter

## Answer:



**225.** Identify the mismatched pair.

1) Cerebrum- Centre for Cardiac and Vascular activities

2) Diencephalon - Reflex centre for muscular activities

3) Cerebellum - Maintains posture

A. posture, equilibrium, heat

B. posture, muscle tone, pressure

C. posture, equilibrium and muscle tone

D. heat, pressure and temperature





# **226.** The human body contains ductless glands called

- A. endocrine glands
- B. exocrine glands
- C. mixed glands
- D. all the above





# 227. Medulla oblongata has

A. cardiac activities

B. respiratory

C. vasomotor

D. all the above

Answer:



# 228. Pulvinus leaf base is commonly found in

the leaves of

A. cells of malvini

B. tulnivi

C. pulvini cells

D. none

#### Answer:





**229.** I am a human hormone. I am secreted from a gland near to neck. I influence general growth rate and metabolic activity in our body. Who am I ?

A. pineal gland

B. pituitary

C. thyroid

D. adrenal glands





# **230.** The thyroid gland is composed of

A. head

B. neck

C. liver

D. spinal cord





# 231. In disease like polio, these nerves are

destroyed by the virus

A. sensory

B. motor

C. association

D. mixed neurons

#### Answer:





232. Nissl's granules are present in

A. cell body

B. dendrite

C. axon

D. myelin sheath

#### **Answer:**

233. Glial cells supply these to neurons

A. nutrients

B. oxygen

C. carbon dioxide

D. proteins

# Answer:



**234.** How is brain in the human beings protected from injuries ?

A. skull

B. ribcage

C. cranium

D. none of the above

# Answer:

235. What are plant growth substances ? Give

examples.

A. Charles Darwin

**B. Francis Darwin** 

C. W. Went

D. Haeckel

Answer:

**236.** Binding of symbiotic nitrogen fixing bacteria to the surface of root hair cell is promoted by the following substance

A. cytokinins

B. gibberellins

C. auxin

D. abscissic acid

# Answer:

237. Parthenocarpy is not desirable in

A. tasteless fruits

B. seedless fruits

C. seed fruits

D. smell less fruits

Answer:

238. Which of the PGRs induces parthenocarpy

in Tomatoes ?

A. gibberellins

B. auxin

C. ethylene

D. cytokinins

Answer:

239. Abscission layers separate these parts

from the plant

A. leaves

B. fruits, flowers

C. leaves, fruits

D. leaves, flowers

#### Answer:

**240.** How does plant respond to sunlight ?

A. mango

B. sunflower

C. eucalyptus

D. cashew nut

Answer:

**241.** Which step proved to be the main challenging obstacle in the production of human insulin by genetic engineering ?

A. Dwarfism

B. Diabetes mellitus

C. Diabetes insipidus

D. Tetany

# Answer:

# 242. Obsreve the following information and

# aswer the following questions.

S.No.	Hormones	Uses
1.	Abscisic acid	Closing of stomata, seed dormancy.
2.,	Auxins	Cell elongation and differentiation of shoots and roots.
3.	Cytokinins	Promote cell division, promote sprouting of lateral buds, delay ageing of fruits.
4.	Ethylene	Ripening of fruit.

i) What do we call the hormones that are

present in plants.

A. animals

**B.** plants

C. sponges

D. all of the above





# 243. Response of plants to gravity is known as

A. phototropism

- B. geotropism
- C. chemotropism
- D. thigmonasty





# 244. This hormone stimulates the function of

adrenal gland

A. luteinizing hormone

B. adreno corticotropin hormone

C. thyroxin

D. gonadotrophin

# Answer:





245. Name the hormone responsible for the

development of secondary sexual characters.

A. progesterone

B. estrogen

C. testosterone

D. insulin

Answer:

**246.** Doctors diagnosed a patient that he is suffering from the deficiency of a hormone. Doctor advised him to try to reduce the sugar percentage in his diet. Name the deficient hormone that the patient is suffering from

A. Dwarfism

- B. Diabetes mellitus
- C. Diabetes insipidus
- D. Tetanus

### Answer:



**247.** I am a part of the brain. I am located below the cerebrum and above medulla oblongate. I coordinate voluntary movements initiated by cerebrum. Who am I ?

A. cerebrum

B. cerebellum

C. pons varoli

D. diencephalon

### Answer:

Watch Video Solution

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

A. pons varoli

B. hypothalamus

C. medulla oblongata

# D. cerebellum

# Answer:

Watch Video Solution

# 249. Electrical impluses travel in a neuron form

Α.

axon 
ightarrow dendrite 
ightarrow axonend 
ightarrow cellbody

Β.

cellbody 
ightarrow axon 
ightarrow dendrite 
ightarrow axonend

# dendrite ightarrow cellbody ightarrow axon ightarrow axonend

D.

axonend 
ightarrow axon 
ightarrow cellbody 
ightarrow dendrite

#### **Answer:**

Watch Video Solution

250. Electrical impluses travel in a neuron form

A. dendrite end

B. axon end

C. cell body

D. nodes of ranvier

# Answer:

Watch Video Solution

**251.** Explain the process of absorption of water by the root hair and movement of water in xylem.

A. geotropism

B. phototropism

C. hydrotropism

D. chemotropism

#### **Answer:**

Watch Video Solution

252. Why is the use of iodised salt advised ?

A. dwarfism

B. diarrhea

C. goiter

D. cretenism

Answer:

Watch Video Solution

253. Name the master gland of the body.

A. pituitary

B. adrenal

C. hypothalamus

D. thyroid

# Answer:



# 254. The movement of plant parts towards

chemicals is called

A. chemotropism

B. thigmotropism

C. nastic movement

D. geotropism

### Answer:



# **255.** What is the meaning of auxin in Greek?

A. to decrease

B. to increase

C. to grow

# D. to change

### Answer:

Watch Video Solution

# **256.** The peripheral nervous system that controls invoulantory actions is called

A. brain only

B. spinal cord only

C. brain and spinal cord

D. dorsal root ganglion

#### Answer:

Watch Video Solution

**257.** How many neurons are present in our nervous system approximately ?

A. 11 billions

B. 10 billions

C. 13 billions

# D. 7 billions

### Answer:

Watch Video Solution

# 258. Who discovered the auxins ?

A. F. W. Went

B. Harris

C. Pothu Rao

### D. Best





# 259. Reflex action involves

A. automatic

- B. involuntary
- C. instantaneous
- D. all the above





260. The inner layer of the three layers which

cover the brain is.....

A. dura mater

B. arachnoid membrane

C. pia mater

D. all the above

#### Answer:





**261.** Plant hormone Gibberellin is extracted from Gibberellin fujikoroi. It is a

A. algae

B. fungus

C. bryophyte

D. pteridophyte

Answer:

**262.** Apical dominance means.....

A. Apical bud inhibits the growth of lateral buds

B. Apical bud induces the growth of lateral buds

C. Lateral bud suppresses the growth of

apical bud

D. Removal of apical bud prevents the

growth of lateral buds





# **263.** What is the comparistion between bolus and peristaltic movement?

A. cerebrum

B. cerebellum

C. pons

D. medulla





## **264.** These glands are known as glands of emergency

A. thyroid

B. pituitary

C. adrenal

D. pancreas

#### Answer:



**265.** The rate of conversion of light energy into chemical energy of organic molecules in an ecosystem is

A. dendrite end

B. axon end

C. cell body

D. nodes of ranvier





266. Cell division usually involves

- A. gibberellins and cytokinins
- B. auxins and abscissic acid
- C. gibberellins and auxins
- D. cytokinins





- **267.** Observe the following a,b statements
- a) Nastic movements are the movements by plants shown by stimuli.
- b) Trophic movements can determine the direction of stimuli
  - A. in response to light
  - B. in response to gravity
  - C. unidirectional

D. non-directional

#### Answer:

Watch Video Solution

## **268.** Growth of stem is controlled by

A. gibberellins

B. auxin

C. cytokinins

D. abscissic acid





### 269. The spinal cord is enclosed in

A. cerebrum

B. cerebellum

C. medulla

D. pons

**Answer:** 

A. auxin

B. gibberellin

C. cytokinin

D. ethylene

#### **Answer:**



### **271.** What is the weight of the brain?

A. 0.02

B. 0.03

C. 0.04

#### D. 0.05

#### Answer:

Watch Video Solution

**272.** Praneeth strikes bat on ground when he was out in match. What hormone worked on him at that time?

A. adrenaline

B. thyroxine

C. testosterone

D. ghrelin

#### **Answer:**



273. Diabetes is related to this gland.

A. thyroid

B. adrenal

C. pancreas

## D. pituitary

#### Answer:

Watch Video Solution

## **274.** A person has loss of control on emotions, which part of brain stops its function ?

A. cerebrum

B. diencephalon

C. mid brain

## D. cerebellum

#### Answer:

Watch Video Solution

## **275.** Perception of heat, cold, pain and integrity of ANS are the functions of

A. midbrain

B. cerebrum

C. cerebellum

D. medulla oblongata

#### Answer:

Watch Video Solution

### 276. Neuron recieves nutrients from

A. RBC

B. glial cells

C. monocytes

D. blood platelets





## 277. Nissil's granules are present in.....

- A. eosinophil
- B. glial cell
- C. neuron
- D. lymphocytes





## 278. The part of the neuron which is generally

called as nerve fibre is

A. dendrites

B. myelin sheath

C. axon

D. cyton

#### Answer:





## **279.** Most neurons of our body are

A. axon

B. cyton

C. dendrites

D. myelin sheath

#### **Answer:**

280. Nerves that carry impulses from brain to

effector organ are called

A. sensory nerves

B. afferent nerves

C. efferent nerves

D. dendrites

#### Answer:

281. Gaps in the axons are called

A. pits

B. pores

C. nodes

D. nodes of ranvier

#### **Answer:**



**282.** Complete the blanks.

.....(1) and spinal cord are the parts of .....(2) nervous system.

A. CNS

B. PNS

C. ANS

D. parasympathetic nervous system

Answer:

283. Where do we find glial cells in brain ?

A. pia matter

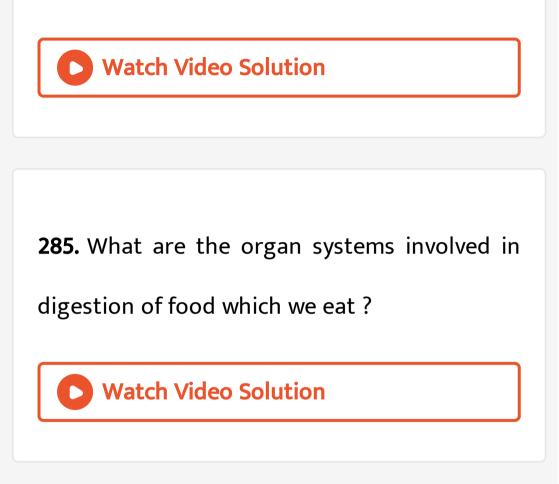
B. dura matter

C. arachnoid membrane

D. grey matter

Answer:

**284.** What do you mean by hunger pangs?



286. Rafi said smell also increase our appetite.

Can you support this statement ? How?



## 287. Write a note on peristalsis and sphincter

function in stomach .

**Watch Video Solution** 

**288.** Observe the given part of the digestive

system . What is it ? What is its role during

digestion ?

289. Give reasons.

If we press tongue against the palate, we can

recognise taste easily.



**290.** Give reasons.

We can't identify taste when food is very hot.

291. Given reasons.

If glucose level falls in blood, we feel hungry.



292. Why do you think small intestine is long

and coiled ?

Watch Video Solution

293. Given reasons.

Urination increases when we take a lot of



**294.** Given reasons.

The process of digestion goes on in a person

whose central nervous system has been

largely affected.



295. Write differences between the following :

Bolus - chime

Watch Video Solution

296. Write differences between the following :

Small intestine - Large intestine

297. Write differences between the following :

**Mastication - Rumination** 

Watch Video Solution

298. Write differences between the following :

**Propulsion - Retropulsion** 

299. How can you say that mouth is a

munching machine ?

Watch Video Solution

300. What is mastication ? Explain the role of

different sets of teeth in this process.

**301.** During the journey of food from mouth to

stomach through esophagus . How does

muscular system coordinate in this process ?



302. Is there any reason for the intestine to be

coiled with many folds. In what way it is

helpful during the process of digestion ?



**303.** What is the function of peristalsis in these parts of Human digestive system ? Small intestine

Watch Video Solution

**304.** What is the function of peristalsis in these parts of Human digestive system ?

Small intestine

305. What is the function of peristalsis in these parts of Human digestive system?
Small intestine
Watch Video Solution

## **306.** what is the function of peristalsis in these

parts?

Large intestine

**307.** How can you justify the enteric nervous

system as the second brain of the gut?

## Watch Video Solution

**308.** Rajesh feels hungry upon seeing food. Sheela says no to food as she is not hungry. What makes Rajesh hungry and what suppresses Sheela's hunger ?

**309.** How are taste and smell related ?



**310.** List out the sphincter muscles of the food canal you have observed and give a brief description ?

Watch Video Solution

**311.** What happens if salivary ducts are closed ?





312. If the size and shape of small intestine is

like esophagus what will happen?



## 313. Prepare a questionnaire to understand

nervous coordination in digestion process.

**314.** What experiment do you perform to understand action of saliva on flour ? Explain It's procedure and apparatus that you followed .



315. Suggest a simple experiment to prove the

role of palate in recognizing taste.

316. Collect information related to feeling and

hunger from your school library and prepare a note on it .



## **317.** Draw the block diagram showing sensation of taste from food material to brain.



**318.** Draw a neatly labeled diagram showing a peristaltic movement in esophagus Explain the importance of mucus on the walls of food pipe.

Watch Video Solution

#### 319. What is the role of mucus in the food pipe

?

**320.** Draw a schematic diagram of villus in small intestine. Explain how digestive system coordinate with circulatory system.

Watch Video Solution

#### **321.** The mere smell or sight of food stimulates

hunger. Describe the process in a flow chart.



**322.** With the help of a diagram show the movement of food from mouth to the stomach . What muscles and nerves are involved in the movement of food and what is this action called ?

Watch Video Solution

#### 323. Prepare a cartoon on Pavlov's experiment

with a suitable caption.

**324.** How do you appreciate stomach as a churning machine . How does this

coordination go on ?

Watch Video Solution

**325.** There is great variety in diversified life processes, express your feeling in the form of

poem.

**326.** Suggest any two important habitual actions to your friend while eating food , keeping in view of this chapter.

Watch Video Solution

**327.** Write down the parts of the gut where the journey of food starts from mouth to anus.

**328.** Which type of life processes would be involved in the breakdown of food in the stomach ?



#### 329. If any of life processes fail to function,

what affect would it have on our body?



**330.** How do we know that we need food ?



331. What plays a major role to identify stale

food?

Watch Video Solution

332. If you are having a tasty dish do you think

the smell of it increases your appetite ?



#### 333. What are your observations in

combustion of sugar activity?

#### Watch Video Solution

#### Observation of how our taste is affected by the sense of smell.



- 1) First close your nose with your fingers.
- 2) Pop in some zeera in your mouth and chew it for sometime.
- 3) After that chew sounf.

334

- 4) Could you recognise the taste?
- 5) How long it taken to know the taste?
- 6) After sometime wash your mouth and repeat the activity by chewing a piece of an
- apple followed by a potato (remember to close your nose)

#### Could you feel the taste of both or did they

#### taste the same ? Why?



### **335.** When does tooth decay start in our

mouth?

Watch Video Solution

**336.** What is the role of different parts of the mouth in helping us to taste keeping sugar crystals over the tongue?

337. Are there any other sensation that affect

taste ?

Watch Video Solution

**338.** What happens to your taste sensation

while sipping hot milk or tea ?

**339.** What do you think could be the range of range of temperature for us to relish food items ?



**340.** What do you think that would happen if the salivary glands did not function in our mouth ?



**341.** Suppose your taste buds were affected what would happen to your interest in having food ?



#### 342. Does the level of saliva secretion change

due to presence of food in the mouth ?

343. Can the process of chewing go on in the

absence of saliva ?

Watch Video Solution

#### 344. Does the saliva have any other roles to

play?



345. What is the use of such an increase in

surface area of food ?

Watch Video Solution

346. What about the nature of medium for

salivary amylase to act on food component?

# **348.** Do you think the pH of our mouth changes ?



**349.** What are different systems that contribute to the proper functioning of digestion in the mouth ?

Watch Video Solution

#### 350. After the digestive process in the mouth

where does the food move to ?

351. What are the systems that come into play

for swallowing food ?

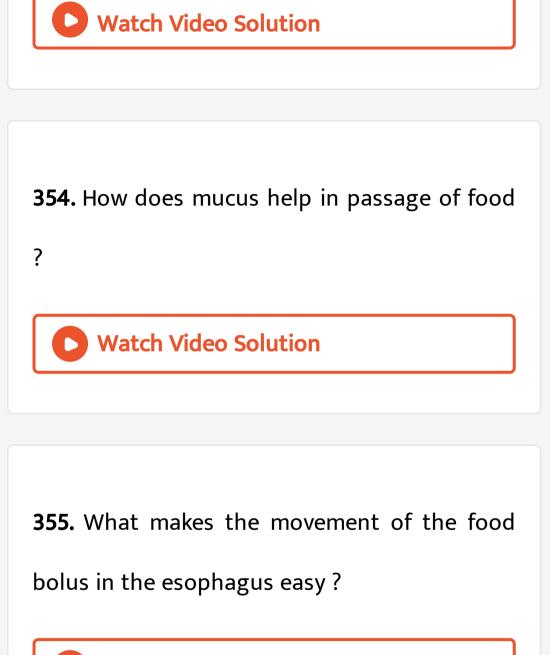
Watch Video Solution

352. What does the schematic diagram tell us

about the esophagus ?

Watch Video Solution

353. What kind of the tube is esophagus?



**356.** Why do you think the stomach is structured like a bag rather than a tube like esophagus ?

Watch Video Solution

#### **357.** What sets such processes into action ?

358. What stimulates stomach muscle into action ?

 • Watch Video Solution

359. What causes the stomach to churn and

mix the food ?



360. Why should only a small quantity of food

be passed from stomach do duodenum?



**361.** What is involved in bringing of about peristalsis?



362. What is the direction of peristalsis ( which

end of the gut does it begin)?

Watch Video Solution

### 363. What happens if the direction of

#### peristalsis is not reversed in animal like cow?



364. Why do you think small intestine is long

and coiled ?

Watch Video Solution

365. What process is involved in this process

of absorption ?

**366.** Often you may have experienced that if you have tension for some reason you start having loose motions . What does this show us ?

**Watch Video Solution** 

**367.** What moves out of the gut?

**368.** Two major pathways of waste expulsion are shown above. Which of the two do you think happens exclusively through the gut ?



#### 369. What controls the exit of stools from the

body?

370. Do you think the control is voluntary ?

Why /Why not ?

Watch Video Solution

371. Did we have a sphincter in any other part

of the digestive canal ? Where was it ?

**372.** What is the fate of the digested substances that move into blood from the intestine ?



#### 373. Energy is stored in



374. Which system do you think will remove

the excess salts from our body?

Watch Video Solution

375. What would be the path of salt removal

from gut to the outside of our body?

**376.** Complete the blanks.

We can recognise the taste of food by pressing the tongue against.....(1) ,.....(1) ,.....(2) recognize the taste , present on the tongue.

**Watch Video Solution** 

**377.** When do we identify the taste easily ?

**378.** Does garlic have a stronger scent than apple? How do you think the stronger scent affect your sensation of taste?

**Watch Video Solution** 

379. How many food materials you have iden

tified correctly?

380. write a few lines on relation between smell and taste

Vatch Video Solution

#### 381. How you ever felt that a particular food is

tasty just by looking at it?

**382.** What is the role of different parts of the mouth in helping us to taste keeping sugar crystals over the tongue?



#### **383.** can we taste on dry tongue?



384. Tongue is a taste receptor . Which nerve

helps to identify the taste?

Watch Video Solution

**385.** How do you show the breakdown of food by using the model of chalkpiece kept in vinegar?

**386.** Write the number of different sets of teeth.

 Watch Video Solution

387. Name the chemical which is used to test

the action of saliva on flour (ate).



**388.** Do you think the pH of our mouth changes ?

Watch Video Solution

### 389. What is the chemical medium present in

mouth?



**390.** Did you observe any change in pH after

eating? What may have caused the change ?

Watch Video Solution

**391.** Optimum pH for the action of salivary amylase is

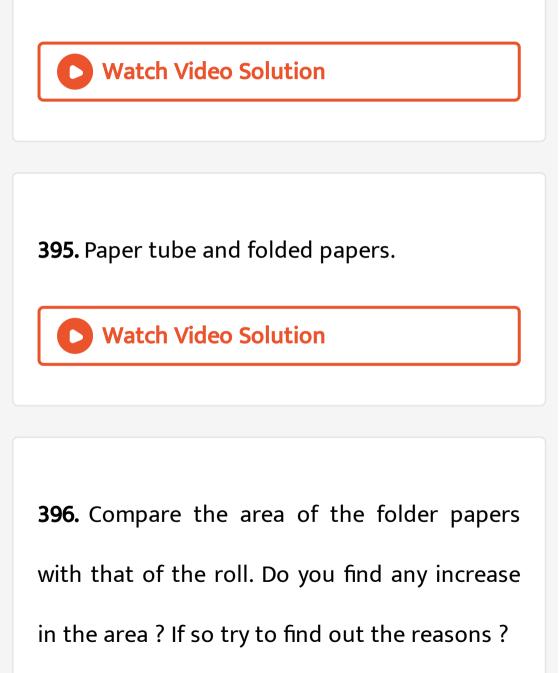
392. Does even the type of food have any role

to play on the ph of our mouth?

Watch Video Solution

**393.** Write a procedure to make a modal of oesophagus to observe how bolus moves forward.

**394.** What is the role of acid in stomach?





### **397.** What systems do you think are working together ?

**Watch Video Solution** 

398. Do you think those systems work together

in the whole length of the digestive canal ?

Why /Why not?

**399.** When do we feel hunger pangs fall in stomach ?

**Watch Video Solution** 

400. Name the hormone that is responsible

for hunger pangs in stomach.

**401.** Complete the blanks.

.....(1) in forebrain and .....(2) cranial nerve plays an important role in carrying the hunger signals to the brain.

Watch Video Solution

**402.** Increase in ghrelin levels results in ?

403. Name the hormone that suppresses hunger pangs.

• Watch Video Solution

**404.** The interaction between which senses

increases our perception of the food we eat ?

Watch Video Solution

405. Dental formula in human beings is



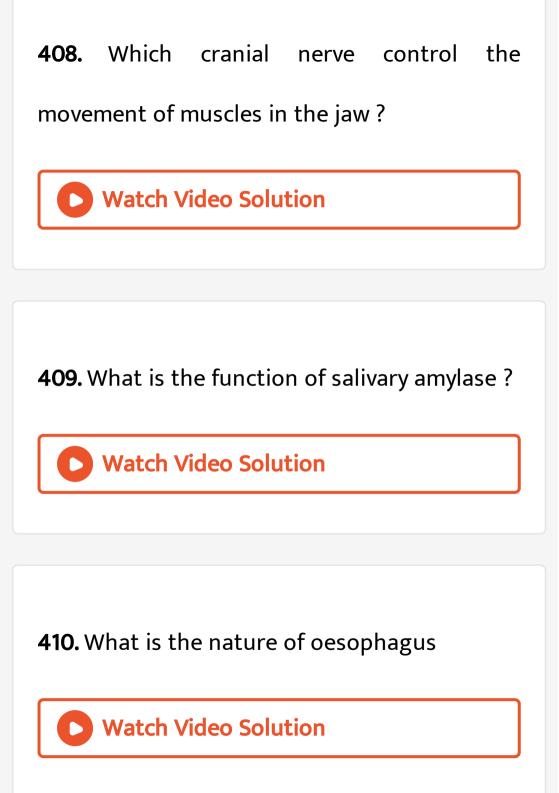
## **406.** Write the number of different sets of teeth.

Watch Video Solution

### 407. What is mastication ? Explain the role of

different sets of teeth in this process.





411. How does mucus help in passage of food ?

Watch Video Solution

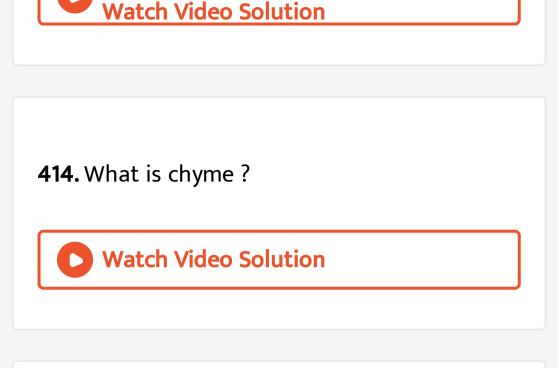
412. What are the two kinds of muscles

present in esophagus ?

Watch Video Solution

**413.** What is peristalsis ?





# **415.** What stimulates stomach muscle into action ?



416. What causes the stomach to churn and

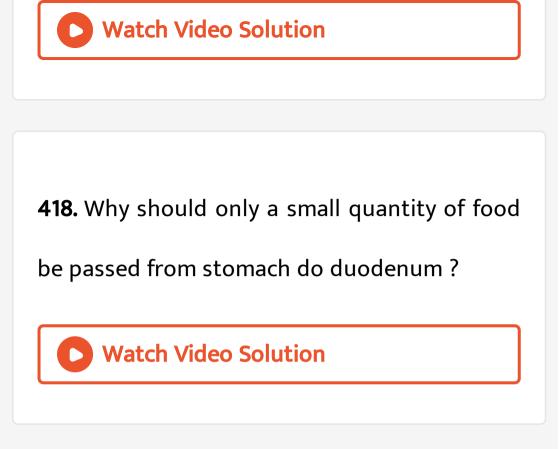
mix the food ?

Watch Video Solution

**417.** Read the following passag:

As the process of digestion in the stomach nears completion, the contraction of the stomach decrease. This prompts the muscles called as pyloric shincter opening of the stomach and the first part of the small intestine or duodenum to realax. This opens the pathway into duodenum releasing the partially digested food (chyme) in small quantities into the duodenum. Peristalsis involves the contractin of the muscle behind the food and the relaxation of he muscles in front of the food and the relaxation of the muscles in front of the food giving rise to na thrust that pushes the food forward through the digestive canal. A wave of contraction followed by realaxtion in muscles help in forward movement of food.

What is the use of duodenum?



**419.** What is involved in bringing of about peristalsis?

420. What is the direction of peristalsis (
which end of the gut does it begin)?
Watch Video Solution

421. What happens if the direction of present

is reversed ?

Watch Video Solution

**422.** What is the nature of the chyme ?





423. Acidic nature of chyme initiates the

production of which hormones ?

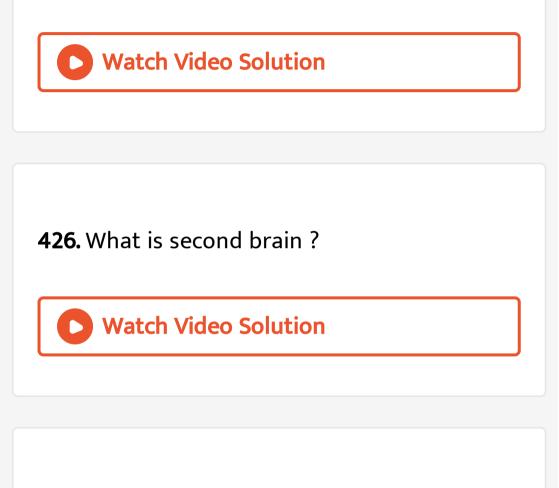
Watch Video Solution

424. Write about the digestion of food in the

small intestine.

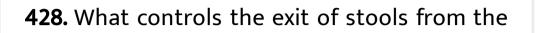
425. Why do you think small intestine is long

and coiled ?



427. What is the other name for "second brain"

?



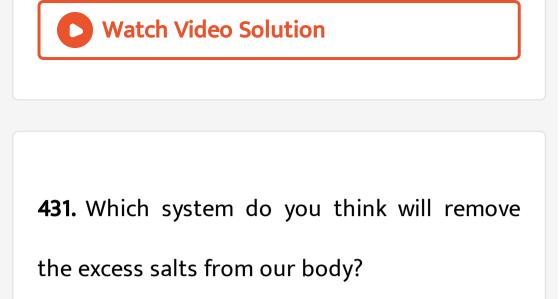
body?

Watch Video Solution

#### 429. What happens during inhalation ?



**430.** What happens during exhalation ?



Watch Video Solution

432. Energy is stored in

**433.** How do we know that we need food ?



**434.** What do you think could be the range of range of temperature for us to relish food items ?



**435.** Ritwik felt hunger pangs but could not take his meal on time . After sometime the hunger pangs disappeared and he felt relieved

. State the reasons.



436. What are the systems involved in the

process of digestion ?

**437.** What are the functions of tongue?



### 438. What is the role of saliva in the digestion

of food?

Watch Video Solution

**439.** Complete the blanks.

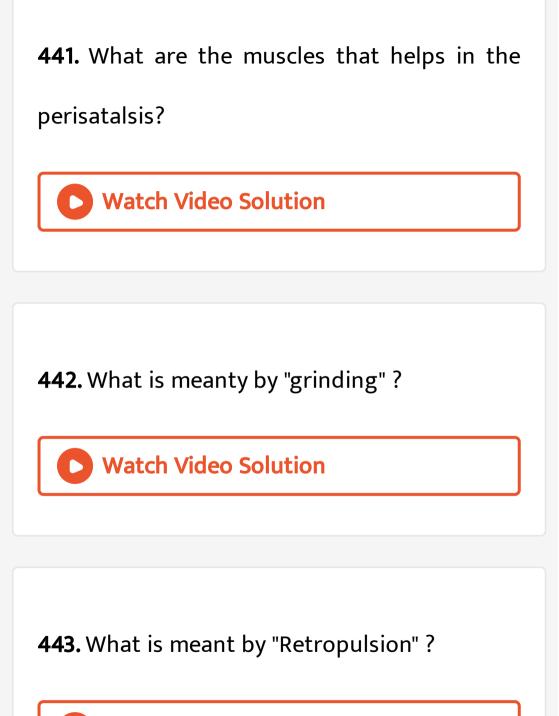
We can recognise the taste of food by

pressing the tongue against.....(1) ,....(1) ,.....(2) recognize the taste , present on the tongue.

Watch Video Solution

**440.** Name the hormone that is responsible

for hunger pangs in stomach.



**444.** Complete the blanks.

The wall of stomach secrete .....(1) acid. The

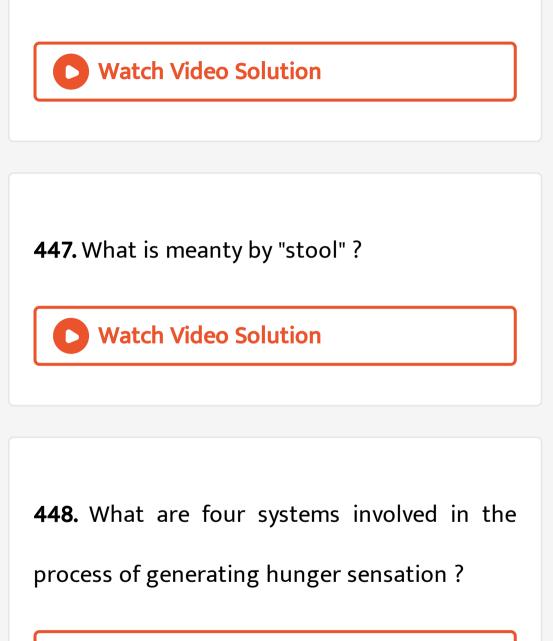
wall of stomach is protected from it's own

acids with the help of .....(2)

Watch Video Solution

445. What is the main function of villi?

446. What is anal sphincter ?



449. write the names of different taste buds.



**450.** Suppose your taste buds were affected what would happen to your interest in having food ?

**451.** Given reasons:

In severe cold and cough, one cannot feel the

taste of the food.



### 452. Why do we salivate during a nap of day

time ?

453. Describe the process of digestion in digestive system.

 Watch Video Solution

**454.** Why do you think the stomach is structured like a bag rather than a tube like esophagus ?

**455.** Complete the blanks.

We can recognise the taste of food by pressing the tongue against.....(1) ,.....(1) ,.....(2) recognize the taste , present on the tongue.

**Watch Video Solution** 

456. Write a short note on digestion of food in

mouth .



**457.** Explain the process of exit of waste materials from large intestine .

Watch Video Solution

**458.** How do we detect the smell of agarbathi?

**459.** Tooth enamel is one of the hardest substances in our body. How does it undergo damage due to eating chocolates and sweets ?



**460.** What do you think that would happen if the salivary glands did not function in our mouth ?



461. If anybody chew food for more time the

following is likely to occur.



462. Write about the experiment conducted by

Ivan Pavlov on conditioned reflex.

463. Write briefly a about the functional and

structural aspects of esophagus

Watch Video Solution

**464.** Explain briefly about the structure of stomach.



465. Draw a neat and labelled diagram of anal

sphincter.

Watch Video Solution

**466.** The coordination among these processes is necessary for utilization oxidation and transport of nutrients

A. Digestion

**B.** respiration

C. circulation

D. all the above

#### Answer:



## 467. What is called Mastication ? How many

### types of teeth help in this process ?

A. Mouth

B. Nose

C. Stomach

D. Intestine

#### **Answer:**



468. The food is pushed into the mouth due to

A. Circular muscles

- B. Surface muscles
- C. Reflex muscles

D. Striated muscles

#### Answer:

Watch Video Solution

## **469.** Which cranial nerve control the movement of muscles in the jaw ?

A. 5th

B. 6th

C. 7th

### D. 10th

#### Answer:

Watch Video Solution

## 470. The slurry mass of food in the mouth is

A. Bolus

B. Chyme

C. Chyle

D. Chylochyme

#### **Answer:**



## **471.** The mechanism for swallowing is controlled by

A. Brain stem

B. Spinal cord

C. Vagus nerve

D. Olfactory nerve





## **472.** Tooth decay start when the pH of the mouth is lower than-

A. Acidic

B. Alkaline

C. Neutral

D. None

#### Answer:



**473.** I am the sphincter which helps in the expulsion of stool. Who am I ?

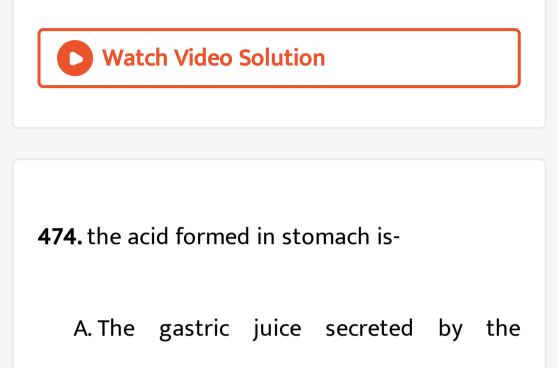
A. Storage of stools

B. exit of stools

C. making of stools

D. breakdown of stools

#### Answer:



stomach

B. The pepsin present in the gastric juice

C. The fats present in the food

D. The mucus secreted by walls of stomach





## 475. When does peristalsis occur in anti-clock-

wise

A. Bolus moves towards stomach

B. Drinking water

C. During vomiting

D. During fasting





476. pH condition of stomach is......

A. Basic

B. Acidic

C. Neutral

D. Salt





## **477.** How can you justify the enteric nervous

system as the second brain of the gut ?

A. Excretory system

B. Circulatory system

C. Digestive system

D. Transport system

#### Answer:





478. Peristalsis is because of ......

A. Longitudinal and circular muscles

B. Jaw muscles

C. Surface muscles

D. Striated muscles

#### **Answer:**

**479.** What is the location of second brain in our body?

A. Neural apparatus in the digestive tract

B. Stomach

C. Pharynx

D. Colon

Answer:

## 480. Protein digestion starts in

A. Stomach

B. Gut

C. Colon

D. Rectum

**Answer:** 



**481.** Fill in the blanks with suitable words given below.

Fluctuations of hormone .....(i).....levels results in sensation of hunger and motivation of consuming food. When you feel your stomach is full and there is no need of food any more. Another hormone .....(ii)......that gets secreted suppresses hunger . We take food into the mouth it has to be chewed thoroughly. For this purpose the......(iii)...... muscles help in chewing actions, while the .....(iv)...... muscles of the jaw moves the jaw up, down ,forward and backward during food mastication. The .....(v)....... nerve controls the muscles of the jaw. Under the action of .....(vi).....nervous system Saliva is released by the salivary glands moistens the food to make chewing and swallowing easier. The salivary .....(vii).....in the saliva breaks down the starch into sugars. As a result of chewing the food is transported into the esophagus by the action of swallowing which is collimated by the swallowing center in the .....(viii)...... and the .....(ix)......The tongue which is gustatory recognizes the taste

and.....(x).....nerve plays an important role

in sensation of taste.

Choose the right ones.

i) Leptin , ghrelin , gastrin , secretin.

ii) ghrelin , Leptin , secretin , gastrin.

iii) deep muscles , surface muscles , circus lard muscles, striated muscles.

iv) surface muscles , deep muscles , neck muscles , long muscles.

v) fifth cranial nerve , second cranial nerve , fifth facial nerve , spinal nerve.

vi) central nervous system , peripheral nervous

system, autonomous nervous system

vii) lipase, sucrose, galactase, amylase.

viii) medulla oblongata , cerebrum , 8th spinal nerve , cranial nerve, 7th cranial nerve. ix) Pons virile , brain stem medulla oblongata , mid brain .

x) 6th cranial nerve , 5th cranial nerve, 10th cranial nerve , optic nerve.

A. 6th cranial nerve

B. 5th cranial nerve

C. Thick nerve

D. 10th cranial nerve

#### Answer:



# **482.** Entry of chyme into duodneum is regulated by a muscle called

A. Pyloric sphincter

B. Anal sphincter

C. Long muscles

D. Straighted muscle





# **483.** How many pairs of salivary glands are present in our mouth ?

A. 2 pairs

B. 3 pairs

C. 4 pairs

D. 5 pairs

#### Answer:



**484.** It is believed that the Diencephalon in fore-brain and vagus nerve (10th cranial nerve) plays an important role in carrying hunger signals to the brain . Hunger pangs continue unto 30-45 minutes . Increase in ghrelin levels results in sensation of hunger and motivation to consume food.

Read above content and prepare any two questions.

- A. 25 to 30 minutes
- B. 30 to 40 minutes
- C. 25 to 40 minutes
- D. 30 to 45 minutes

Answer:



**485.** Which of the following is not a component of pancreatic juice?

A. Fats

B. Carbohydrates

C. Proteins

D. Minerals

Answer:

486. Name the teeth with sharp and pointed

edges .

A. Incisors

B. Canines

C. Premolars

D. Molars

Answer:

487. What is the dental formula of man?

A. 3,1,3,2

B. 2,1,3,2

C. 2,1,2,3

D. 2,3,1,2

**Answer:** 

488. Food bolus forms in

A. Bolus

B. Chyme

C. Cud

D. All the above

**Answer:** 

**489.** The mechanism for swallowing is controlled by

A. Cerebrum

B. Diencephalon

C. Mid brain

D. Brain stem

#### Answer:

## **490.** what is the pH value of solution?

## A. Alkaline

B. Acidic

C. Neutral

D. All

#### **Answer:**



**491.** What about the nature of medium for salivary amylase to act on food component ?

A. Acidic

B. Alkaline

C. Neutral

D. Both acidic and alkaline

#### Answer:

492. What is the quantity of saliva secreted by

us per day ?

A. 1-1.25 liters

B. 1-1.5 liters

C. 2-2.25 liters

D. 1.75 liters

#### Answer:

**493.** What is the function of peristalsis in these parts of Human digestive system ? Small intestine

- A. Oesophagus
- B. Stomach
- C. Small intestine
- D. All

### Answer:



494. The gastric juice secreted by the walls of

stomach contains ......

A. Hydrochloric acid

B. Nitric acid

C. Sulfuric acid

D. Amino acid

#### Answer:

**495.** What happens if the direction of peristalsis is not reversed in animal like cow ?

A. Cow

B. Buffalo

C. Goats, sheep's

D. All

Answer:

496. What is the chemical nature of food when

it enters the small intestine ?

A. Acidic

B. Alkaline

C. Neutral

D. All

**Answer:** 

**497.** By which process the absorption of nutrients takes place in small intestine.

A. Elective process

B. Selective process

C. Both selective and elective process

D. None

Answer:

**498.** Sesation of hunger and motivation to consume food occurs due to

A. Increase in ghrelin levels

B. Decrease in ghrelin levels

C. Increase in leptin levels

D. Increase in secretin levels

#### Answer:

499. We can taste the food quickly which is in

the form of

A. Solid

B. Liquid

C. Semi solid

D. Gas

Answer:

500. What are the different types of papillae

present on the tongue ?

A. Villate papillae

B. Pholiate papillae

C. Piliform papillae

D. Fungi form papillae

### Answer:

**501.** Name the Russian scientist who conducted experiments on classical conditioning.

A. Conditioned reflects

B. Unconditional reflex

C. Insight learning

D. Instincts

Answer:

**502.** What protects the inner lining of the stomach from the harmful effects of hydrochloric acid ?

A. Saliva

B. Pepsin

C. Peristalsis

D. Mucus

**Answer:** 

**503.** What are the parts of human digestive system ?

A. Muscular system

B. Nervous system

C. Both A and B

D. None of the above

# Answer:

504. In which process oxidation of food takes

place ?

A. Excretion

**B.** Circulation

C. Respiration

D. None of the above

### Answer:

505. Large protein molecules are broken down

in .....of digestive track.

A. Mouth

B. Stomach

C. Oesophagus

D. Small intestine

# Answer:

506. The gastric juice secreted by the walls of

stomach contains ......

A. Hydrochloric oxide

B. Sulfuric acid

C. Nitric acid

D. Phosphoric acid

# Answer:

507. Olfactory receptors present

in.....triggering signals to brain.

A. Tongue

B. Nose

C. Ear

D. All

### Answer:

508. What is enteric nervous system?

A. Stimulating and coordinating the

breaking down of food

- B. Absorbing nutrients
- C. Expelling wastes
- D. All the above

### Answer:

509. Water and nutrients are absorbed in

A. Stomach

- **B. Small intestine**
- C. Large intestine
- D. All the above

**Answer:** 

**510.** The muscles of the lower jaw are controlled by

A. Circular

B. Surface

C. Longitudinal

D. Transverse

# Answer:

**511.** Name the enzyme present in saliva.

A. Tripsin

**B.** Pepsin

C. Amylase

D. All the above

**Answer:** 

512. Saliva is released from glands under the

action of this nervous system

A. Central nervous system

B. Peripheral nervous system

C. Autonomous nervous system

D. Sympathetic nervous system

### Answer:

**513.** Fill in the blanks with suitable words given below.

Fluctuations of hormone .....(i).....levels results in sensation of hunger and motivation of consuming food. When you feel your stomach is full and there is no need of food any more. Another hormone .....(ii)......that gets secreted suppresses hunger . We take food into the mouth it has to be chewed thoroughly. For this purpose the......(iii)....... muscles help in chewing actions, while the .....(iv)...... muscles of the jaw moves the jaw up, down ,forward and backward during

food mastication. The .....(v)...... nerve controls the muscles of the jaw. Under the action of .....(vi).....nervous system Saliva is released by the salivary glands moistens the food to make chewing and swallowing easier. The salivary .....(vii).....in the saliva breaks down the starch into sugars. As a result of chewing the food is transported into the esophagus by the action of swallowing which is collimated by the swallowing center in the .....(viii)...... and the .....(ix)......The tongue which is gustatory recognizes the taste and.....(x).....nerve plays an important role

in sensation of taste.

Choose the right ones.

i) Leptin , ghrelin , gastrin , secretin.

ii) ghrelin , Leptin , secretin , gastrin.

iii) deep muscles , surface muscles , circus lard muscles, striated muscles.

iv) surface muscles , deep muscles , neck muscles , long muscles.

v) fifth cranial nerve , second cranial nerve , fifth facial nerve , spinal nerve.

vi) central nervous system , peripheral nervous

system, autonomous nervous system

vii) lipase , sucrose , galactase , amylase.

viii) medulla oblongata , cerebrum , 8th spinal nerve , cranial nerve, 7th cranial nerve. ix) Pons virile , brain stem medulla oblongata , mid brain .

x) 6th cranial nerve , 5th cranial nerve, 10th cranial nerve , optic nerve.

A. Medulla oblongata and cerebellum

B. Medulla oblongata and brain stem

C. Cerebrum and cerebellum

D. Cerebrum and brain stem

Answer:



514. pH of saliva is..... in nature.

A. Acidic

B. Neutral

C. Alkaline

D. None of the above

**Answer:** 

**515.** Fill in the blanks with suitable words given below.

Fluctuations of hormone .....(i).....levels results in sensation of hunger and motivation of consuming food. When you feel your stomach is full and there is no need of food any more. Another hormone .....(ii)......that gets secreted suppresses hunger . We take food into the mouth it has to be chewed thoroughly. For this purpose the......(iii)...... muscles help in chewing actions, while the

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muscles, striated muscles.

iv) surface muscles , deep muscles , neck muscles , long muscles.

v) fifth cranial nerve , second cranial nerve , fifth facial nerve , spinal nerve.

vi) central nervous system , peripheral nervous

system , autonomous nervous system

vii) lipase , sucrose , galactase , amylase.

viii) medulla oblongata, cerebrum, 8th spinal

nerve, cranial nerve, 7th cranial nerve.

ix) Pons virile , brain stem medulla oblongata , mid brain .

x) 6th cranial nerve , 5th cranial nerve, 10th cranial nerve , optic nerve.

A. Leptin

B. Ghrelin

C. Thyroxine

D. Paratharmone

# Answer:

Watch Video Solution

# **516.** Ghrelin Sensation of hunger ? Suppression of hunger

A. Leptin

B. Ghrelin

C. Adrenalin

D. Cortisol

### Answer:



**517.** With the help of a diagram show the movement of food from mouth to the stomach . What muscles and nerves are involved in the movement of food and what is this action called ?

A. Circular muscles

B. Surface muscles

C. Longitudinal muscle

D. Transverse muscle

### Answer:

Watch Video Solution

# **518.** When do we feel hunger pangs fall in stomach ?

A. Level of glucose in the blood rises

B. Level of glucose in the blood remain

unchanged

C. Level of glucose in blood falls

D. All the above

### **Answer:**

Watch Video Solution

519. When stomach goes empty this hormone

is secreted from the walls of the stomach

A. Ghrelin

B. Leptin

C. Secretin

D. Gastrin

**Answer:** 

Watch Video Solution

**520.** What about the nature of medium for salivary amylase to act on food component ?

A. starch

B. Protein

C. Fat

D. Minerals

### **Answer:**



**521.** Complete the blanks.

If the pH is beyond 7, it is said to be .....(1) If

the pH is below, 7 it is said to be .....(2).

A. Alkaline

B. Acidic

C. neutral

D. None of the above

**Answer:** 

Watch Video Solution

**522.** What about the nature of medium for salivary amylase to act on food component ?

A. Alkaline

B. Acidic

C. neutral

D. All the above

### **Answer:**

necessary

Watch Video Solution

**523.** For the digestion to occur in the food canal, coordination of these two processes are

- A. Respiration, circulation
- B. Nutrition and digestion
- C. excretion, transport
- D. Respiration, reproduction

### Answer:



**524.** These animals have extrapouch in the stomach to store quickly swallowed food

# A. Herbivores

- B. Ruminants
- C. carnivores
- D. Omnivores

### **Answer:**



# 525. Acid should be added to water but not

water to the acid. Why?

A. Saliva, iodine

B. Saliva, starch, janus green B

C. chlorophyll, saliva

D. Xylene, iodine

### **Answer:**

Watch Video Solution

526. Belching and burning sensation is caused

by the production of.... Acid in the stomach

A. Nitric acid

B. Hydro chlroric acid

C. sulfuric acid

D. Phosphorous acid

### **Answer:**

Watch Video Solution

**527.** Umami taste is ..... For savory

# A. Chinese

B. Japanese

C. English

D. Indian

Answer:

Watch Video Solution

528. The interaction between which senses

increases our perception of the food we eat ?

A. Sense of teste and see

- B. Sense of sight and smell
- C. Sense of taste and small
- D. Senses of smell and touch

# Answer:

Watch Video Solution

529. Fill in the blanks .

.....(1) plays a major role in identifying the taste of a substance. .....(2) experiment is

done to prove this.

A. Taste buds

B. teste receptors

C. Filiform papillae

D. All the above

#### Answer:

Watch Video Solution

**530.** There is a difference between the tastes of the food which is simply placed on the

tongue and when the tongue pressed against

# the palate. Give reason

A. Throat

B. buccal cavity

C. Palate

D. Glottis



531. Iodine solution is used for testing the

presence of

A. Starch

B. protein

C. Fats

D. Minerals

Answer:

532. When we eat we use these without our

knowledge?

A. Sight (eyes)

B. nose

C. Tongue

D. All the above

#### Answer:

533. What is the role of acid in stomach?

A. Cartilage

B. hard bones

C. Muscle

D. Tendons

Answer:

534. To increase the area for action of the food

substance food must be

A. Sent into the mouth

B. chewed

C. Smelt

D. Cooked

# Answer:

**535.** Acidic nature of chyme initiates the production of which hormones ?

A. Trypsin, chymotrypsin

B. Pepsin, Trypsin

C. Secretin , cholecystokinin

D. Lipase, sucrase

# Answer:

536. How many neurons are present in enteric

nervous system?

A. Transmitters

B. Neurotransmitters

C. Electrons

D. Electrodes

**Answer:** 

537. the second brain contains about million

neurons....

A. 200

B. 100

C. 300

D. 500

#### Answer:

538. With what name do we call the partially

digested food in stomach?

A. Bolon

B. Bolus

C. Chyme

D. Semi bolus

#### Answer:

539. Identify the mismatched pair.

- 1. Villi small intestine
- 2. Pyloric sphincter junction of small intestine
- and large intestine
- 3. Reverse peristalsis-man
  - A. Herbivores
  - B. Ruminate
  - C. Carnivore
  - D. Omnivore





# **540.** How much time it would take for emptying of 100 % food from small intestine ?

A. 30-40 hours

- B. 20 30 hours
- C. 30 50 hours
- D. 20 40 hours



**541.** In which part of the intestine the faecal matter is stored for some time ?

A. Rectum

B. Colon

C. Caecum

D. Duodenum

Answer:

**542.** Read the sentence , identify the error and

rewrite it.

The area of absorption in small intestine is increased by lacteals.

A. Villi

B. Lymph vessels

C. Blood vessels

D. Sphincter Muscles

# Answer:

# 543. If energy has to be obtained from food it

has to be

A. Reduced

B. Oxidized-reduced

C. Oxidized

D. Fermented

Answer:

**544.** Name the digestive tract which is nick named by scientist as the second brain

A. Second brain

B. Third brain

C. First brain

D. Fourth brain

#### **Answer:**

545. How can you justify the enteric nervous

system as the second brain of the gut?

A. Excretory system

B. Circulatory system

C. Digestive system

D. Transport system

#### Answer:

**546.** Respiration is an involuntary process controlled by the medulla oblongata of this nervous system

A. Autonomous nervous system

B. Peripheral nervous system

C. Central nervous system

D. A symphetic nervous system

#### Answer:

**547.** Read the sentence, find the error and rewrite it.

Diaphragm plays an important role in the

respiratory movements in women

A. Liver

B. Lungs

C. Abdomen

D. Kidney

Answer:

# **Medicine Oriented Material**

- 1. Organ of Corti rests on
  - A. Scala vestibuli
  - B. Scala tympani
  - C. Scala media
  - D. Cochlear canal





**2.** Correct sequence of layers from outer to inner in intestine of humans is

A. Duramater - arachnoid - piamater

B. Duramater- piamater - arachnoid

C. Arachnoid - duramater- piamater

D. Piamater - arachnoid - duramater

#### Answer:

**3.** Each cerebral hemisphere is divided into \_\_\_\_\_ lobes-

A. 3

B.4

C. 5

D. 6



4. The inner layer of the three layers which

cover the brain is.....

A. Piamater

B. Duramater

C. Arachnoid

D. Perineural mater

#### **Answer:**

5. Which of the following is not a reflex action?

A. Cardiac muscles

- B. Skeletal muscles
- C. Sensory organs
- D. Viscera



**6.** Are all functions of our body under direct control of the brain and spinal cord ? What do you think So?

A. Pons

B. Cerebrum

C. Cerebellum

D. Cerebral hemispheres

# Answer:

7. What is sympathetic nervous system ?

A. Autonomous

B. Sympathetic

C. Para sympathetic

D. Spinal cord

Answer:

**8.** The part of the brain of frog that controls the voluntary actions is

A. Thalamus and cerebral cortex of the brain

B. Thalamus and medulla oblongata

C. Cerebral cortex and medulla oblongata

D. Medulla oblongata



**9.** In spilt brain operations, the nerve tract that is cut is-

A. Fissure of Rolando

B. Fornix

C. Corpus callosum

D. Hippocampal gyrus

**Answer:** 

**10.** What is peristalsis movement ? Compare the similarity of bolus movement in esophagus with cycle tube and potato experiment what you have conducted in school.

- A. Hair and organs
- B. Pacinian corpuscles
- C. Skeletal muscles
- D. Graffian corpuscles



# 11. The change in focal length of an eye lens is

caused by the action of the

A. Iris

B. Ciliary muscle

C. Pupil

D. Optic nerve





# **12.** The 3rd, 6th and 11th cranial nerves are respectively

- A. 3,4,5
- B. 3,4,6
- C. 4,5,6
- D. 4,6,7



13. Identify the mismatched pair-

A. cerebrum - memory

B. Medulla oblongata - temperature

regulation

C. Cerebellum - equilibrium

D. Olfactory lobes - smell

Answer:

**14.** Identify the one which is not a reflex action.

A. Swallowing food

B. Closing eyes in bright light

C. Perspiration in hot climate

D. Salivation to tasty food

Answer:

**15.** Which of the following is a slow neuro transmitter?

A. Adrenaline

B. Epinephrine

C. GABA

D. Acetyl Choline

# Answer:

16. Pre-excitation potential difference between

outside and inside of a nerve is-

A. Reaction potential

B. Action potential

C. Resting potential

D. Spike potential

Answer:

17. Extension of sympathetic nervous system

is-

A. Adrenal medulla

B. Adrenal cortex

C. Pineal

D. Adrenal gland

#### **Answer:**

**18.** The axon of nerve cell in hand is shorter than the axon of nerve cell in leg. Do you support this statement ? Why?

A. Receiving impulse

B. Transformation of energy

C. Conducting impulse

D. Energy provision

#### Answer:

**19.** During the transmission of nerve impulse through a nerve fibre, the potentila on the inner side of the plasma membrane has which type of electric charge?

A. Biological

B. Physical

C. Chemical

D. Mechanical

Answer:

**20.** Is the structure of neuron suitable for transmission of impulses ? Analyse.

A. Electrical

B. Mechanical

C. Chemical

D. Both b and c

#### Answer:

21. The part of the brain that is responsible for

hand eye coordination-

A. Pons

B. Hippocampus

C. Cerebellum

D. Medulla oblongata

#### Answer:

22. I am a part of brain. I am the site of mental

abilities and memory. Who am I?

A. Temporal lobe

B. cerebellum

C. Parietal lobe

D. Occipital lobe

#### Answer:

23. Depolarization of nerve cell involves-

A. Influx of  $K^+$ 

B. Influx of  $Na^+$ 

C. Influx of  $Ca^+$ 

D. Efflux of  $Ca^+$ 

Answer:

**24.** Are all functions of our body under direct control of the brain and spinal cord ? What do you think So?

A. Effectors

B. Nervous organs

C. Receptors

D. Intermediary organs

## Answer:

25. What are jacobson's organs ? What is their

function ?

A. Touch

B. Sight

C. Smell

D. Hearing

#### **Answer:**

**26.** Paralysis of both the lower limbs and not the upper limbs due to spinal cord damage is-

A. Hemiplegia

B. Posterioplegia

C. Quadriplegia

D. Paraplegia

# Answer:



27. Which of the following cranial nerves of

man is both sensory and motor?

A. Glossopharyngeal

B. Abducens

C. Vagus

D. Olfactory

Answer:

28. The sympathetic nerves in mammals. arise

from

A. Sacral region

**B.** Cervical region

C. Thoracic lumbar region

D. 3rd cranial nerves

Answer:

29. What is the importance of reflex actions?

A. Spinal cord

B. Hypothalamus

C. Cerebellum

D. Medulla oblongata

Answer:

30. Mid brain contains-

A. Diencephalon

B. corpora quadrigemina

C. Cerebrum

D. Spinal cord

Answer:

31. Hormones are secreted by ductless glands

of human body. Iodine containing hormone is

A. Enzyme

B. Glandular secretion

C. Chemical messenger

D. Excretory product

#### Answer:

**32.** Name the phytohormone that promotes cell division.

A. ADH

B. ACTH

C. PTH

D. GH

**Answer:** 

**33.** Release of milk from mother is mediated through-

A. Prolactin

B. Relaxin

C. Oxytocin

D. Progesterone

# Answer:

34. Intercellular communication in multi

cellular organisms occurs through-

A. Digestive system only

B. Respiratory system only

C. Nervous system only

D. Nervous and endocrine system

**Answer:** 

**35.** Which one of the following pairs correctly matches a hormone with a disease resulting from its deficiency?

A. Luteinizing hormone - failure of

ovulation

B. Insulin - diabetes insipidus

C. Thyroxine - tetany

D. Parathyroid - diabetes mellitus

## Answer:





36. Which one of the following hormones is

modified amino acid?

A. Prostaglandin

B. Oestrogen

C. Progesterone

D. Epinephrine

## Answer:

**37.** What will happen if Islets of langerhans fall to function ?

A. Increased heart beat rate

B. Hyperglycemia

C. Hypoglycemia

D. Increased BMR

#### **Answer:**



**38.** Cell plate which transforms into middle lamellum is secreted by

A. Adrenal cortex

B. Adrenal medulla

C. Adenohypopysis

D. Neurohypophysis

# Answer:

# 39. Glucagon is

A. Beta cells of pancreas

B. Beta cells of liver

C. Alpha cells of pancreas

D. Alpha cells of liver

Answer:

40. Human insulin is obtained from genetically

engineered

A. Thyroxine

B. Insulin

C. glucagon

D. ADH

**Answer:** 

41. Which hormone is called "flight or Flight"

hormones?

A. Thyroxine

B. Adrenaline

C. Oxytocin

D. Oestrogen

## Answer:

**42.** Name the scientists who are associated with the extraction of insulin from degenerated animal pancreas.

A. Bayliss

B. Sterling

C. Banting and Best

D. Mering

#### Answer:

43. Which one of the following is not a protein

A. Growth hormone

B. ACTH

?

C. FSH

D. Testosterone

#### **Answer:**

44. Which one of the following pair of organs

includes only the endocrine glands?

A. Thymus and testes

B. Parathyroid and adrenal

C. Pancreas and parathyroid

D. Adrenal and ovary

Answer:

45. Pituitary gland is divided into

A. Brain

**B.** Testes

C. Ovary

D. Kidneys

Answer:

**46.** High concentration of estrogen inhibits secretion of

A. Thyroid

B. Secretions of anterior pituitary

C. Deposition of fat

D. Secretion of ACTH

## Answer:

47. Name the digestive gland which act as

exocrine as well as endocrine.

A. Adrenal

**B.** Pancreas

C. Pituitary

D. Liver

Answer:

**48.** Which of the following is an emergency gland?

A. Testis

B. Adrenal

C. thymus

D. Pituitary

# Answer:

49. Hormone secreted in stomach when we are

hungry?

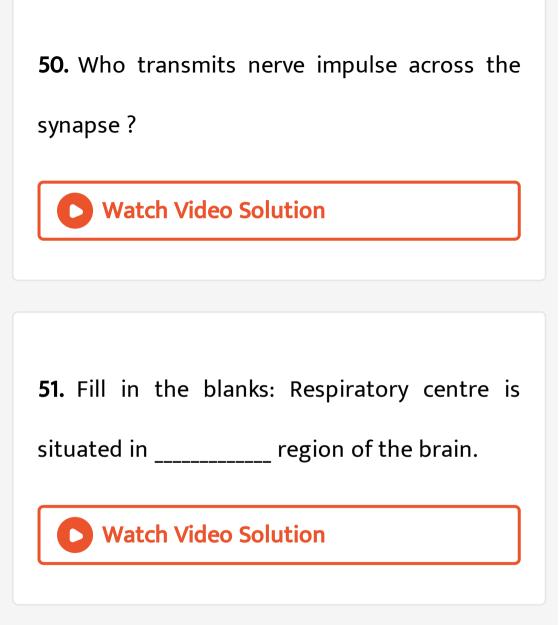
A. Ghrelin

B. Thymus

C. Progesterone

D. Oestrogen

#### Answer:





# 53. The cells involved in sealing the minor

# damaged vascular openings are



54. Fill in the blanks: Sense of smell is
perceived by lobe.
Watch Video Solution
55. Fill in the blanks: Peristalsis of the intestine
is the action of the nervous
system,
<b>Watch Video Solution</b>

**56.** In a man, abducens nerve is injured. Which one of the following functions will be affected?

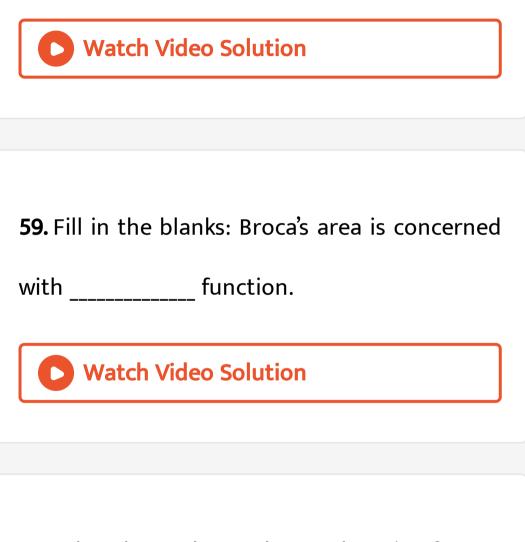


### 57. Name the specialized insulatory sheath of

neuron.



58. What is parasympathetic nervous system?



60. What do you know about arbor vitae?

**61.** Complete the blanks.

Cerebrum is locataed in .....(1) and

acts as site of .....(2).

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62. Fill in the blanks: The fluid present between

piamater and arachnoid membrane is



63. Fill in the blanks: Cerebro spinal fluid is

secreted by \_\_\_\_\_.

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64. Reflex action involves

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**65.** What is autonomous nervous system ?



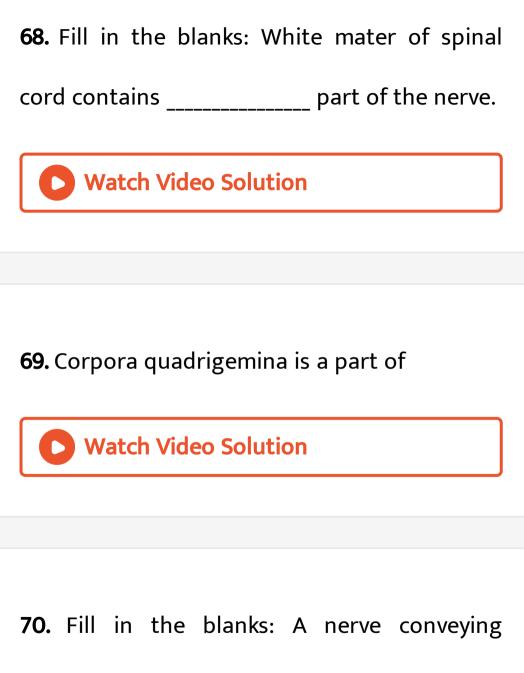


66. Alzheimer disease in humans is associated

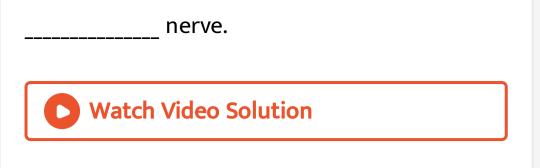
with the deficiency of :



**67.** Which aortic arch is absent in frog?



impulses from a tissue to nerve centre is



**71.** Complete the blanks.

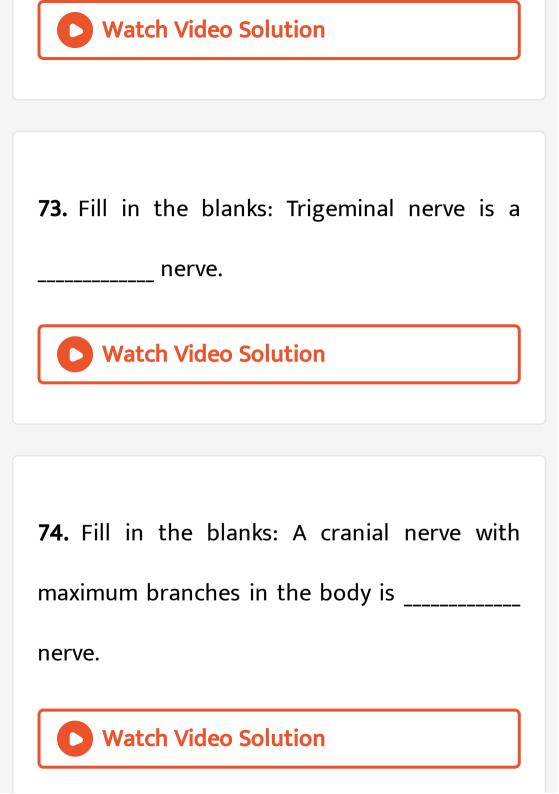
.....(1) and spinal cord are the parts of .....(2)

nervous system.

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72. The eye lens can be change its focal length

due to working of \_\_\_\_\_ muscles.



**75.** When a neuron is in resting state, i.e., not conducting any impulse, the axonal membrane

is :

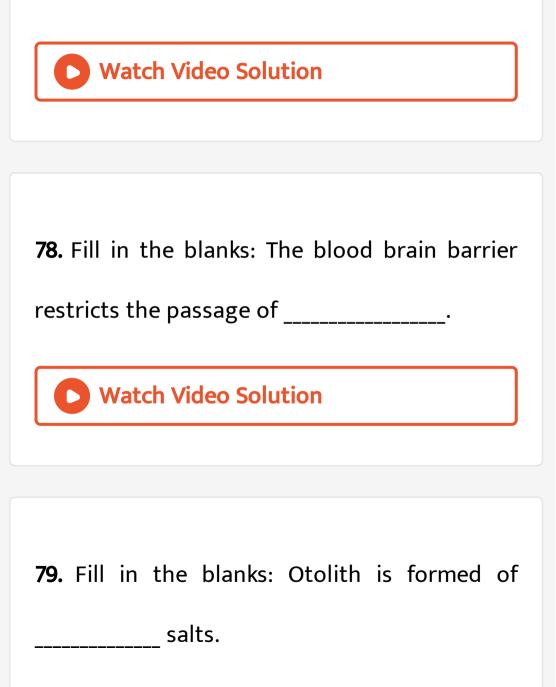


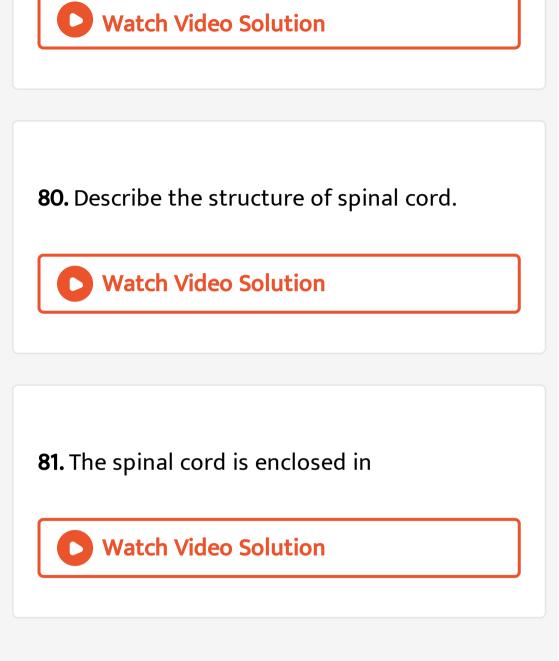
76. Fill in the blanks: Brain is dependent upon

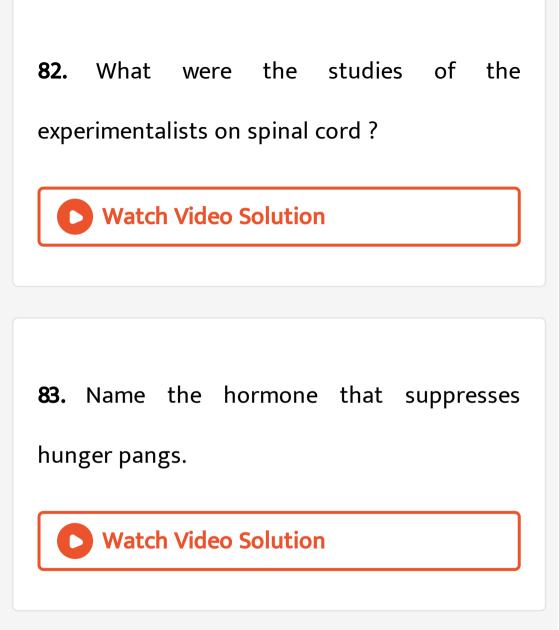
blood supply for \_\_\_\_\_ and



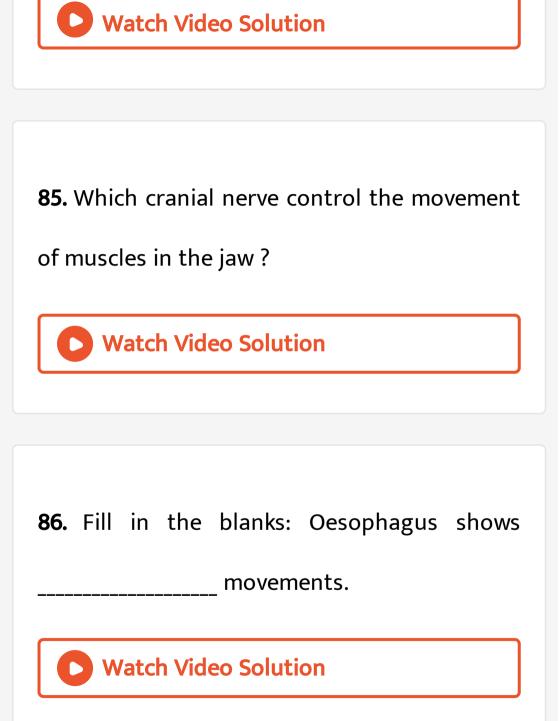
**77.** The vagus nerve is the cranial nerve.

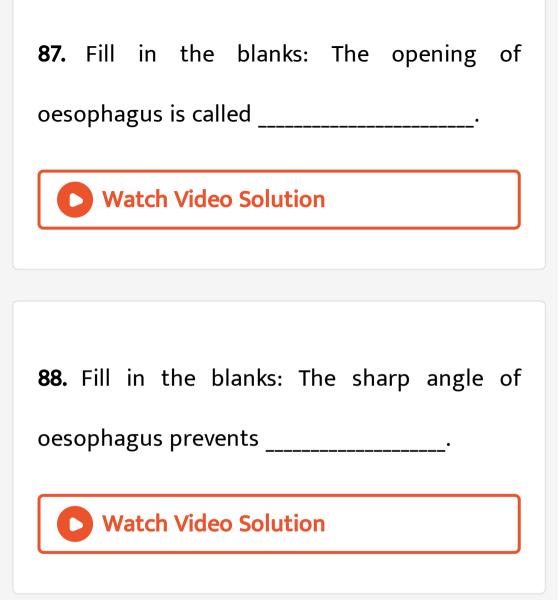






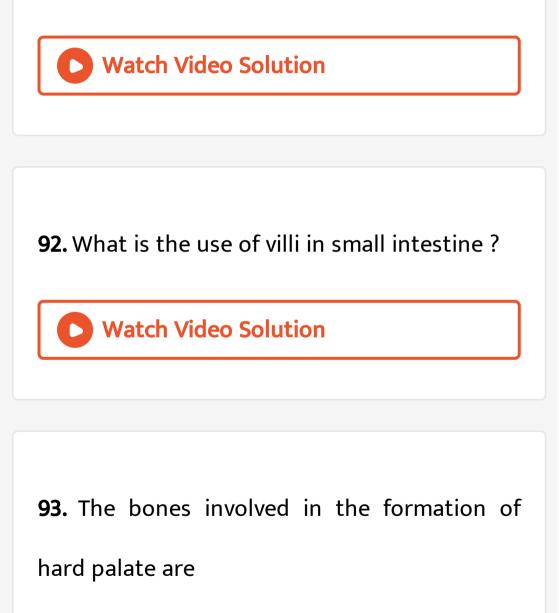
84. Dental formula in human beings is





89. Fill in the blanks: The lining of oesophagus has \_\_\_\_\_ cells. Watch Video Solution 90. Fill in the blanks: The nerves that supply to oesophagus are called \_\_\_\_\_ and Watch Video Solution

**91.** The large intestine absorbs



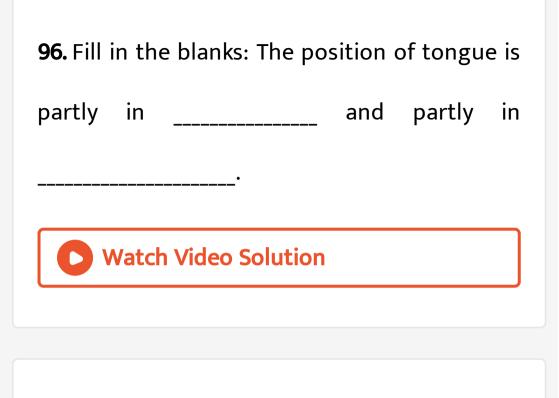
94. Fill in the blanks: The soft palate contains a

hanging portion called \_\_\_\_\_.



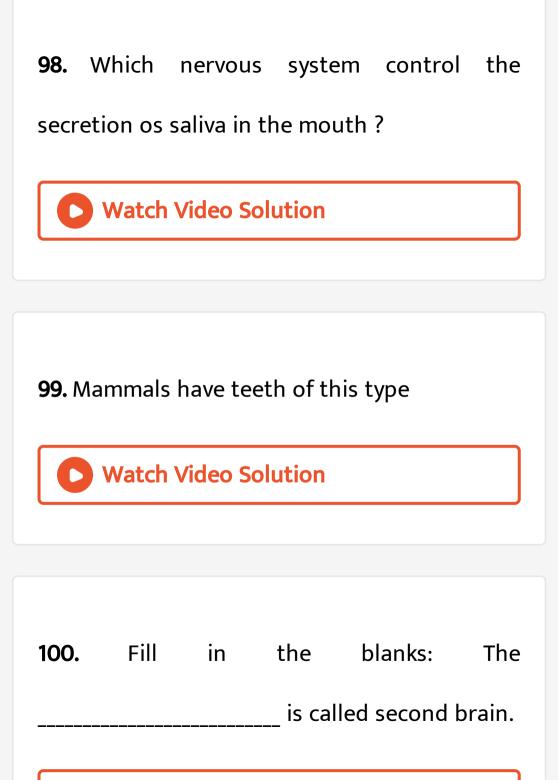
## 95. What are the different types of papillae

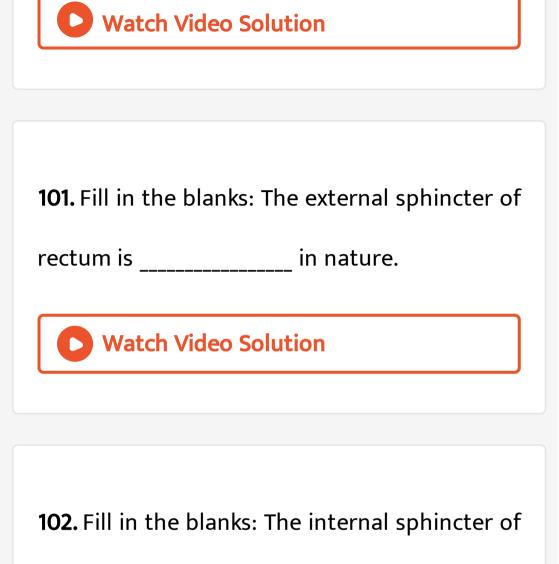
present on the tongue ?



### 97. Saliva is released from glands under the

action of this nervous system





rectum is controlled by \_\_\_\_\_

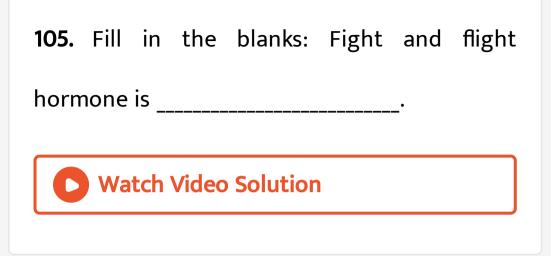
103. Which part of ovary in mammals acts as

an endocrine gland after ovulation?

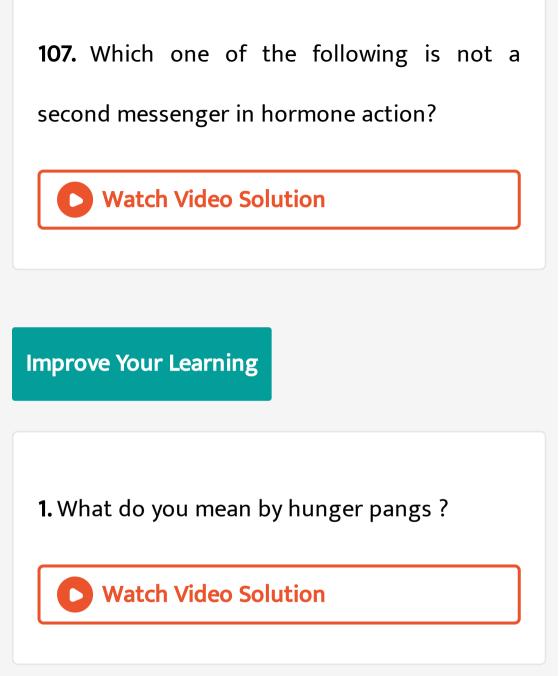


104. Where does reabsorption of water takes

place in excretion?



**106.** A person is having problems with calcium and phosphorus metalbolism in his body.Which one of the following glands may not be functioning properly?



2. What are the organ systems involved in

digestion of food which we eat ?

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3. Rafi said smell also increase our appetite.

Can you support this statement ? How?

4. Write a note on peristalsis and sphincter

function in stomach .

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#### 7. Give reasons.

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### 13. Write differences between the following :

Small intestine - Large intestine



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20. What is the function of peristalsis in these

parts?

oesophagus

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#### 21. what is the function of peristalsis in these

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Stomach

22. What is the function of peristalsis in these

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## Improve Your Learning Fill In The Blanks

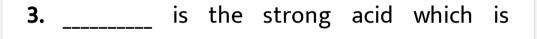
## 1.2:1:2:3 is the ratio of our dentition. Here 1

represents

2. Large protein molecules are broken down in

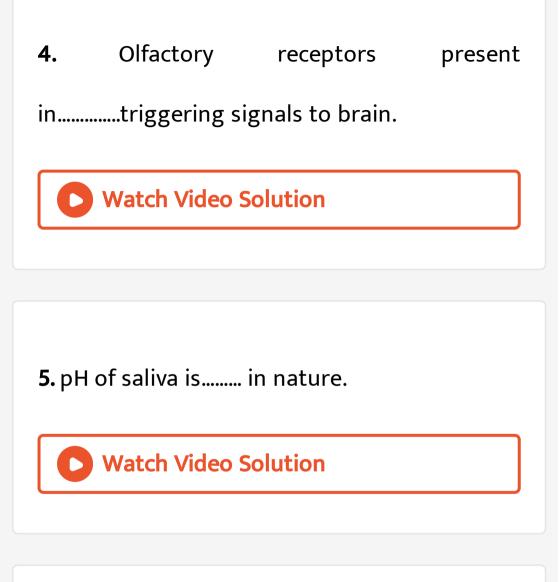
.....of digestive track.

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secreated during digestion.





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Fluctuations of hormone .....(i).....levels results in sensation of hunger and motivation of consuming food. When you feel your stomach is full and there is no need of food any more. Another hormone .....(ii)......that gets secreted suppresses hunger . We take food into the mouth it has to be chewed thoroughly. For this purpose the......(iii)...... muscles help in chewing actions, while the .....(iv)...... muscles of the jaw moves the jaw up, down ,forward and backward during food mastication. The .....(v)...... nerve controls the muscles of the jaw. Under the action of .....(vi).....nervous system Saliva is released by the salivary glands moistens the food to make chewing and swallowing easier. The salivary .....(vii).....in the saliva breaks down the starch into sugars. As a result of chewing the food is transported into the esophagus by the action of swallowing which is collimated by the swallowing center in the .....(viii)...... and the .....(ix)......The tongue which is gustatory recognizes the taste and.....(x).....nerve plays an important role in sensation of taste.

Choose the right ones.

- i) Leptin , ghrelin , gastrin , secretin.
- ii) ghrelin , Leptin , secretin , gastrin.

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ix) Pons virile, brain stem medulla oblongata,

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**1.** In which of the following situations you can taste quickly. ( )

- A. Put sugar crystals on tongue
- B. Put sugar solution on tongue.
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Answer:

2. Peristalsis is because of ( )

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#### **Answer:**

**4.** Glucose and amino acids are absorbed through the following part of villus.

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B. 2. Blood capillary

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Answer:

5. The region in brain portion that controls

hunger signals

A. 1. Medulla

- B. 2. Diencephalon
- C. 3. Cerebrum
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**6.** Human organism is an internal combustion machine because of

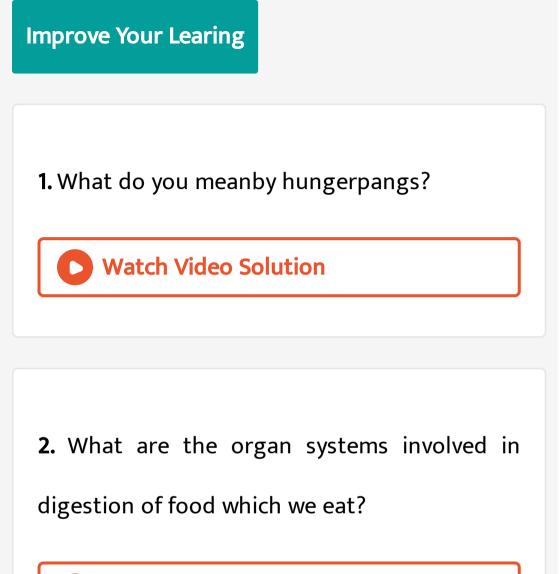
## A. 1. Assimilation of energy from food

B. 2. Liberate  $CO_2$  during respiration

C. 3. End state digestion

D. 4. Secrete powerful digestive juices

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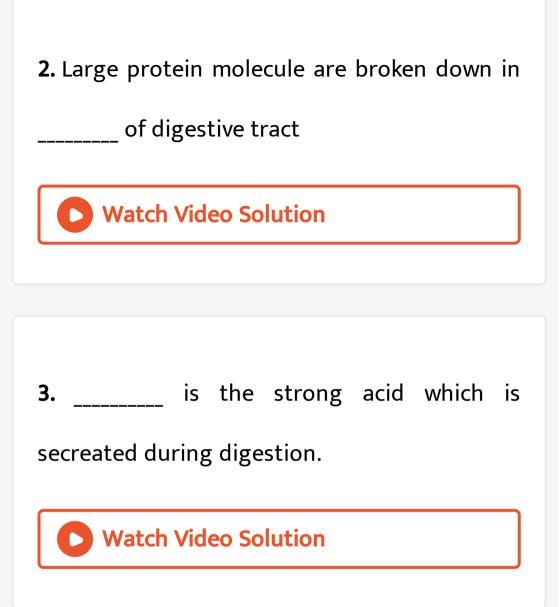
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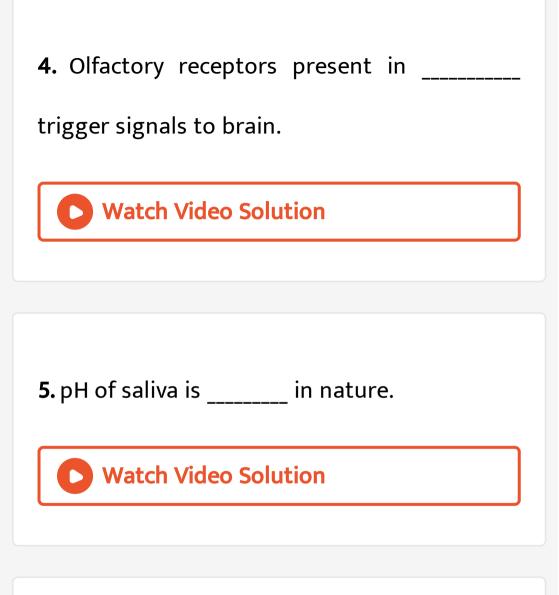
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Answer:

