



BIOLOGY

BOOKS - SURA BIOLOGY (TAMIL ENGLISH)

STRUCTURAL ORGANISATION OF ANIMALS

Textbook Evaluation Choose The Correct Answer

1. In leech locomotion is performed by

- A. Anterior sucker
- **B.** Posterior sucker
- C. Setae
- D. None of the above

Answer: A::B::D



2. The segments of leech are known as

A. Metameres (somites

B. Proglottids

C. Strobila

D. All the above

Answer: A

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3. Pharyngeal ganglion in leech is a part of

A. Excretory system

B. Nervous system

C. Reproductive system

D. Respiratory system

Answer: B

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4. The brain of leech lies above the

A. Mouth

B. Buccal Cavity

C. Pharynx

D. Crop

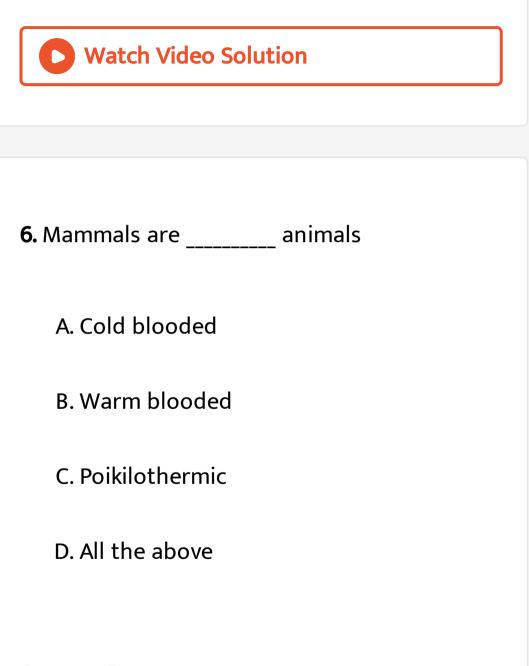
Answer: C

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5. The body of leech has

- A. 23 segments
- B. 33 segments
- C. 38 segments
- D. 30 segments

Answer: B



Answer: B



7. The animals which give birth to young ones

are

A. Oviparous

B. Viviparous

C. Ovoviviparous

D. All the above

Answer: B





Textbook Evaluation Fill In The Blanks

1. The posterior sucker is formed by the

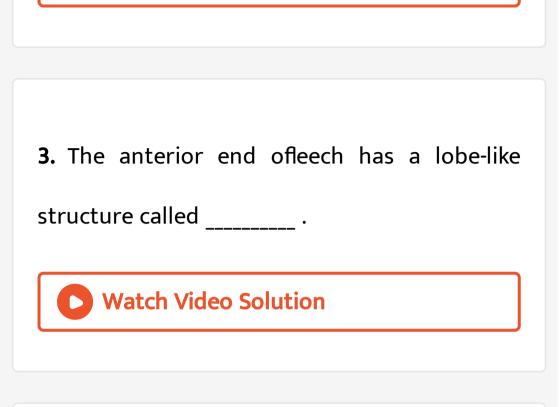
fusion of the _____ segments.

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2. The existence of two sets of teeth in the life

of an animal is called _____ dentition.





4. The blood sucking habit of leech is known as

5. _____ separate nitrogenous waste from

the blood in rabbit.

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6._____ spinal nerves are present in rabbit.

Watch Video Solution

Textbook Evaluation Identify Whether The Statements Are True Or False Correct The False Statement 1. An anticoagulant present in saliva of leech is

called heparin.

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2. The vas deference serves to transport the

ovum.



3. The rabbit has a third eyelid called tympanic

membrane which is movable.

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4. Diastema is a gap between premolar and molar teeth in rabbit.



5. The cerebral hemispheres of rabbit are connected by band of nerve tissue called corpora quadrigemina.



Textbook Evaluation Match Columns I li And lii Correctly





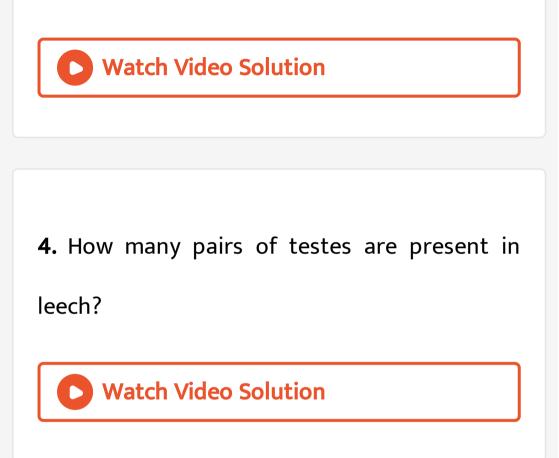
1. Give the common name of the Hirudinaria

granulosa.

Watch Video Solution

2. How does leech respire?

3. Write the dental formula of rabbit.



5. How is diastema formed in rabbit?

6. What organs are attached to the two bronchi?



7. Which organ acts as suction pump in leech?



8. Full form of 'CNS'



9. Why is the teeth of rabbit called heterodont?

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10. How does leech suck blood from the host?

Watch Video Solution

Textbook Evaluation Short Answer Questions

1. Why are the rings of cartilages found in trachea of rabbit?

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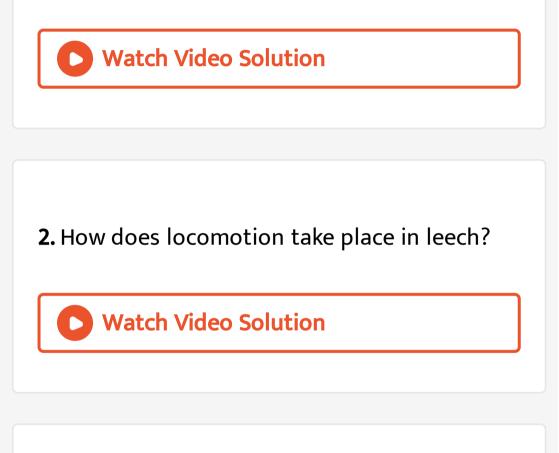
2. List out the parasitic adaptations in leech.

> Watch Video Solution

Textbook Evaluation Long Answer Questions

1. How is the circulatory system designed in

leech to compensate the heart structure?



3. Explain the male reproductive system of

rabbit with a labelled diagram.

Textbook Evaluation Higher Order Thinking Skills Hots

1. Arjun is studying in tenth standard. He was down with fever and went to meet the doctor. As he went to the clinic he saw a patient undergoing treatment for severe leech bite. Being curious, Arjun asked the doct,or why leech bite was not felt as soon as it attaches to the skin? What would have been the reply

given by the doctor?



2. Shylesh has some pet animals at his ho.me. He has few rabbits too. One day while feeding them he observed something different with the teeth. He asked his grandfather, why is it so? What would have been the explanation of his grandfather?



Textbook Evaluation Value Based Question

1. Leeches do not have an elaborate secretion

of digestive juices and enzymes - Why?

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2. How is the digestive system of rabbit suited

for herbivorous mode of feeding?

Government Exam Questions Answers

1. Rabbit do not have _____ teeth.

A. incisors

B. canines

C. premolars

D. molars

Answer: B

Additional Questions Answers Choose The Correct Answer

1. Leeches have _____.

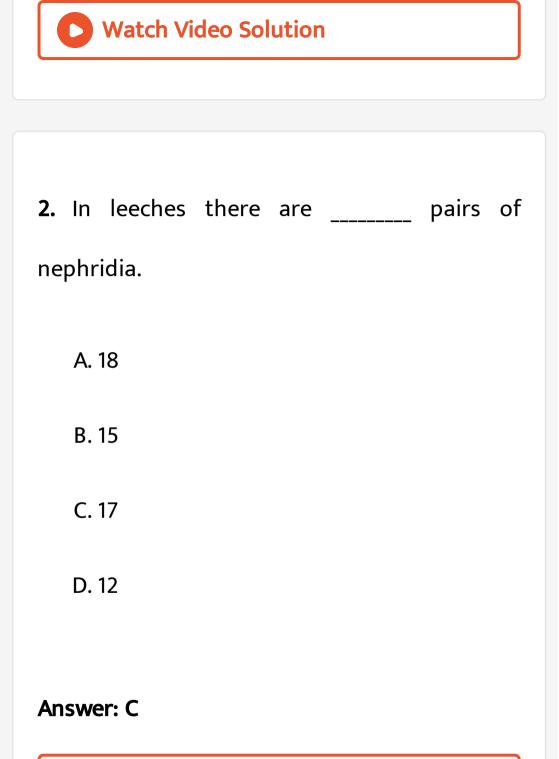
A. heart

B. lungs

C. true blood vessels

D. excretory organs

Answer: D



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- 3. In leeches sperms are stored in
 - A. epididymis
 - B. vas deferens
 - C. testis
 - D. ejaculatory duct

Answer: A

The ovary of leech lies in the _____
 segment.

A. 10th

B. 11th

C. 13th

D. 15th

Answer: B

5. The number of cranial and spinal nerves in

rabbit are _____ respectively.

A. 11 and 36

B. 12 and 37

C. 12 and 36

D. 10 and 37

Answer: A



6. The urinogenital canal of female rabbit is

formed by union of ______

A. urethra and vagina

B. urinary bladder and urethra

C. cowper's gland and urinary bladder

D. urinary bladder and vagina

Answer: D

7. The _____ glands are modified glands of

the skin.

A. perineal

B. mammary

C. gastric

D. salivary

Answer: B

8. The opening of pulmonary arch into right ventricle of rabbit is guarded by ______ semilunar valves.

A. 2

B.4

C. 3

D. 1

Answer: C



9. Leeches may grow to a length of _____.

A. 35 cm

B. 45 cm

C. 25 cm

D. 20 cm

Answer: A



10. Write the dental formula of rabbit.

A.
$$\frac{2033}{1023}$$

B. $\frac{2003}{1003}$
C. $\frac{2030}{1020}$
D. $\frac{2030}{1220}$

Answer: A



11. The _____ on both sides join to form the

genital atrium in leech.

A. ejaculatory ducts

B. epididymis

C. sperm Vesicle

D. vas deferens

Answer: A

12. Each kidney is made up of several ______ .

A. mascula

B. nephrons

C. cortex

D. epididymis

Answer: B

13. PNS is formed of ____ pairs of cranial nerves

in Rabbit.

A. 10

B. 12

C. 14

D. 16

Answer: B

A. uterus

B. vagina

C. fallopian tube

D. ovary

Answer: C

15. The third ventricle in brain of rabbit lies in

A. cerebrum

B. cerebellum

C. diencephalon

D. medulla

Answer: C

16. The _____ region of a leech consists of 12th

-22nd segments.

A. cephalic

B. clitellar

C. pre-clitellar

D. middle

Answer: D

17. The body wall of a leech comprises of _____ layers

A. four

B. five

C. three

D. two

Answer: B

A. blood

B. crop

C. hirudin

D. proteolytic enzyme

Answer: C

19. The peripheral nervous system in a rabbit
consists of pairs of cranial nerves.
A. 21
B. 14
C. 12
D. 37
Angulon C
Answer: C

20. i. The stomach of leech is a triradiate aperture.

ii. The buccal cavity of leech leads into a muscular larynx.

iii. Crop is the smallest portion of the alimentary canal in a leech.

iv. The last chamber of crop in a leech, opens into the anus.

A. all are correct

B. all are incorrect

C. i & ii are correct

D. ii & iv are correct

Answer: B

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21. The epididymis in a leech leads to a small

duct called _____.

A. genital atrium

B. vas deferens

C. ejaculatory duct

D. non of the above

Answer: C

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22. _____ is a technique of bleeding in a patient to remove toxic impurities from the body caused due to leech bite.

A. Blood circulation

B. Blood fusion

C. Blood transfusion

D. Blood letting

Answer: D

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23. The _____ glands in a rabbit secrete milk

and nourish the young ones.

A. sweat

B. salivary

C. mammary

D. sebaceous

Answer: C



24. On the lower side of the thoracic cavity, is

the dome shaped _____.

A. lungs

B. liver

C. heart

D. diaphragm

Answer: D



25. The lungs of a rabbit are enclosed by a

membrane called ______.

A. cardiac muscle

B. pleura

C. pericardium

D. meninges

Answer: B



26. The right and left hemispheres in the brain

of a rabbit are connected by _____.

A. diencephalon

B. corpus callosum

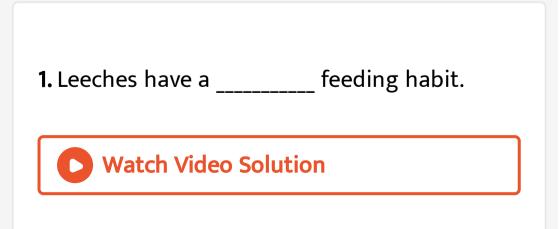
C. duramater

D. none of the above

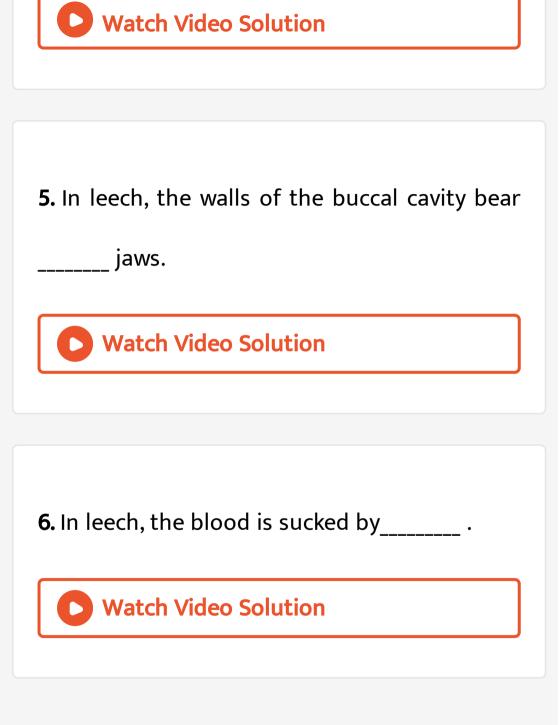
Answer: B

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Additional Questions Answers Fill In The Blanks



2. The ofleech produces a cocoon.
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3. In leech, is the largest portion of the alimentary canal.
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4. Each chamber in the digestive system of leech bears backwardly directed



7. The coelomic fluid of a leech contains
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• All the form channels of sinculaters, eveters
8. All the four channels of circulatory system
are connected together in segment of
leech.
Watch Video Solution

9. Leeches prevent blood clotting by secreting

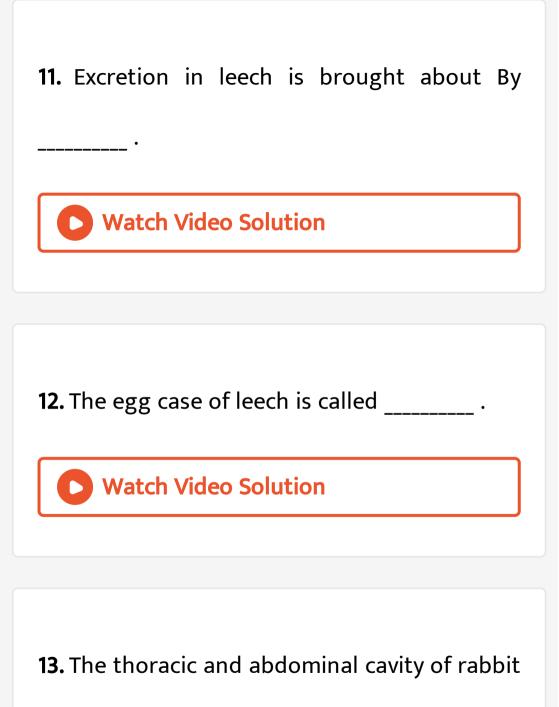
a protein called ______.

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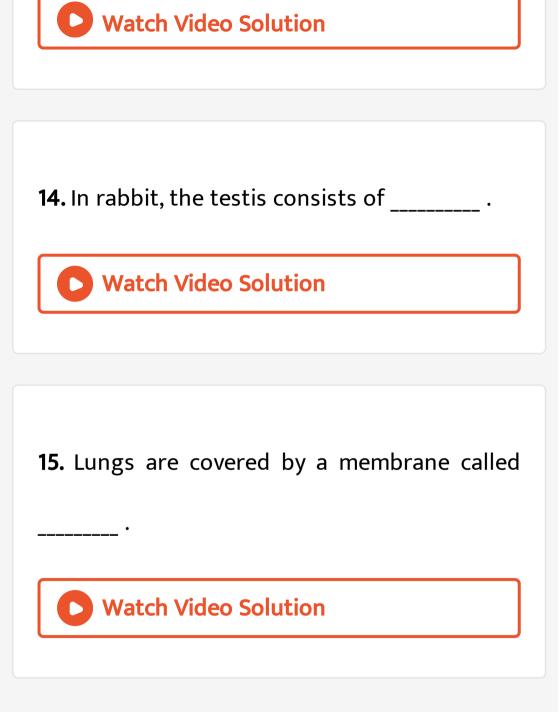
10. The sub pharyngeal ganglion in leech is

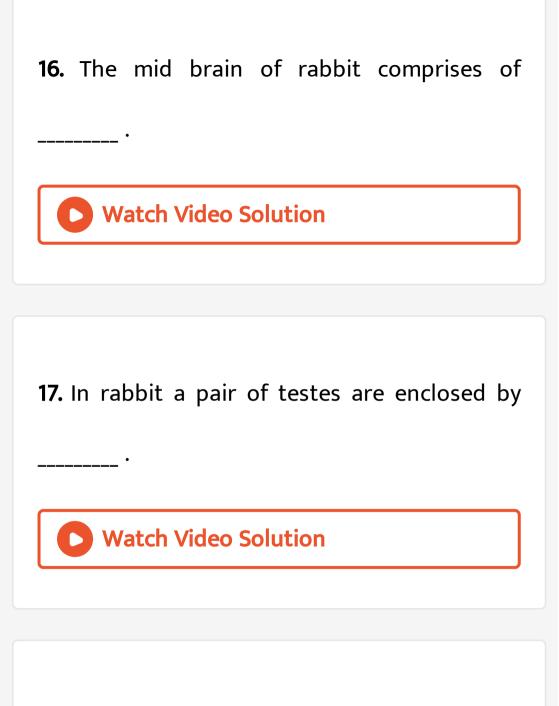
formed b y fusion of _____ pairs of ganglia.



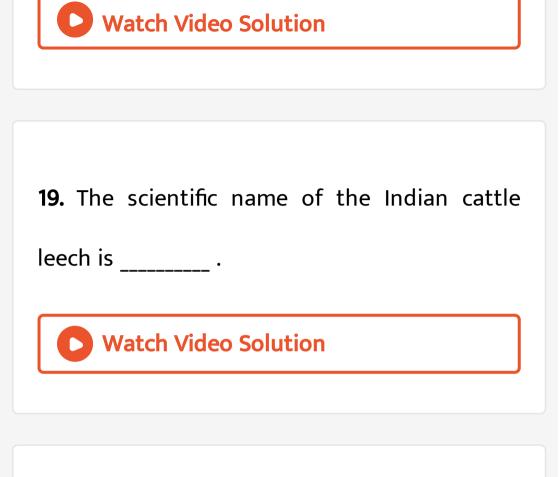


is se parated by _____.





18. Leeches belong to phylum _____



20. In leeches, each segment bears a number

of projections called_____

21. On the mid dorsal side of 26 th segment

lies the _____ in leech.

Watch Video Solution

22. The scientific name of common rabbit is

Watch Video Solution

·____ •

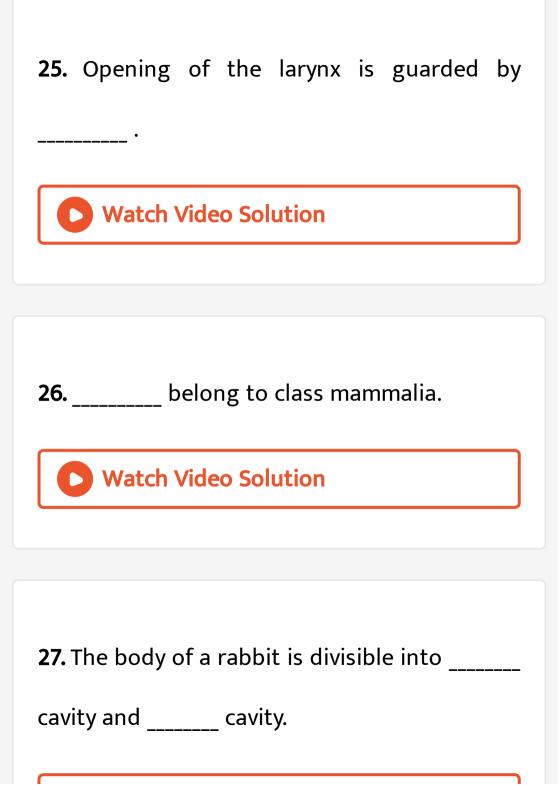
23. The thoracic and abdominal cavity of rabbit

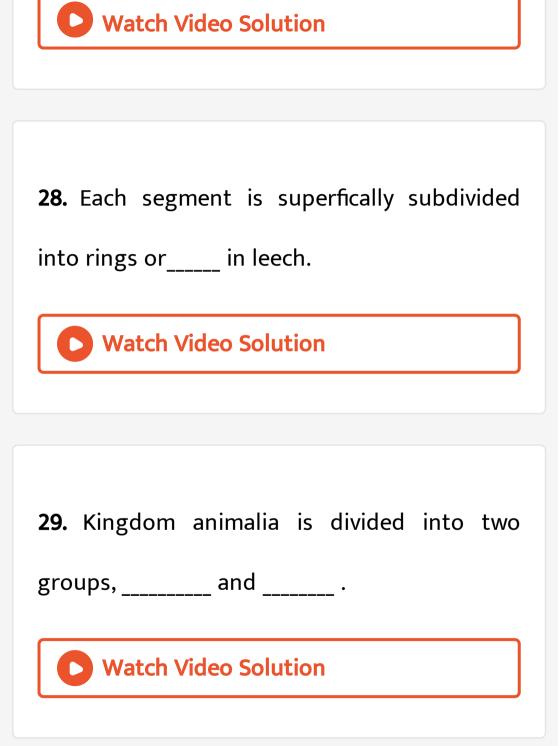
is se parated by _____.

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24. The enlarged anterior part of the Trachea

or wind pipe is _____.





30. Anterior and posterior suckers of a leech
help inand
Watch Video Solution

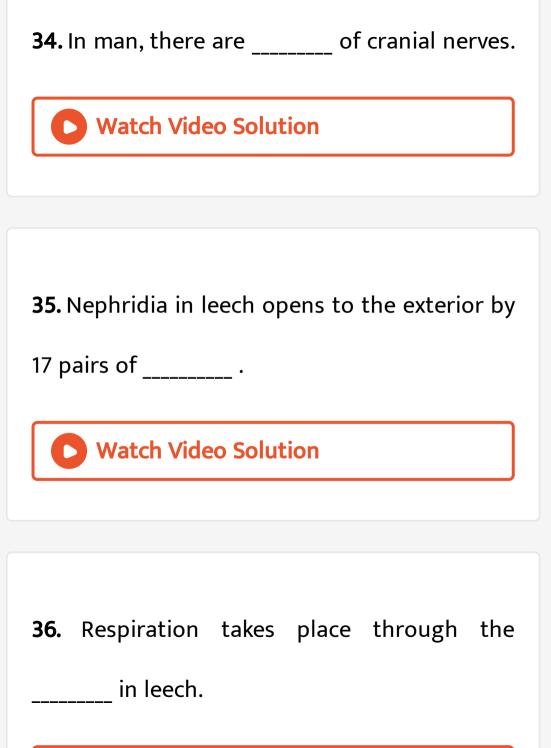
31. The central nervous system of leech consists of a _____ and a paired ventral nerve cord .

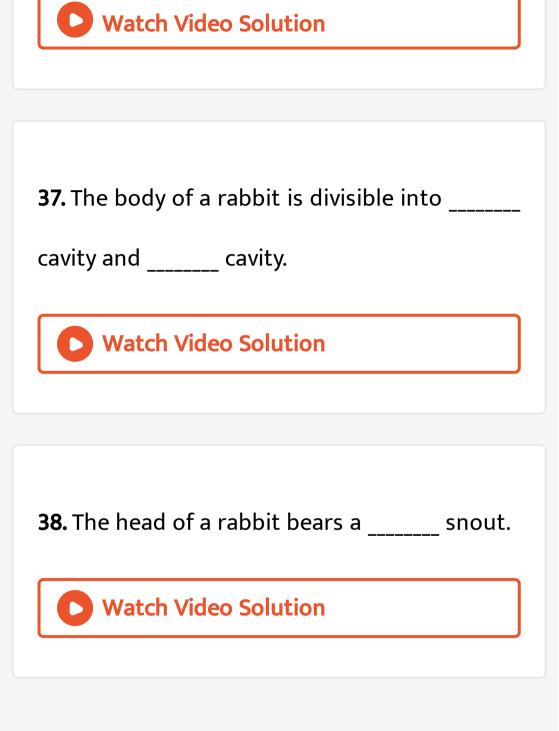
32. _____ ganglion lies below the pharynx and is formed by the fusion of four pairs of ganglia.

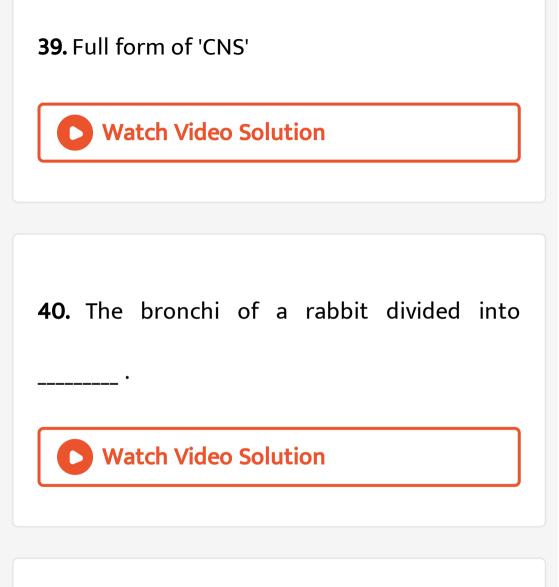


33. Digestion of a leech takes place in the

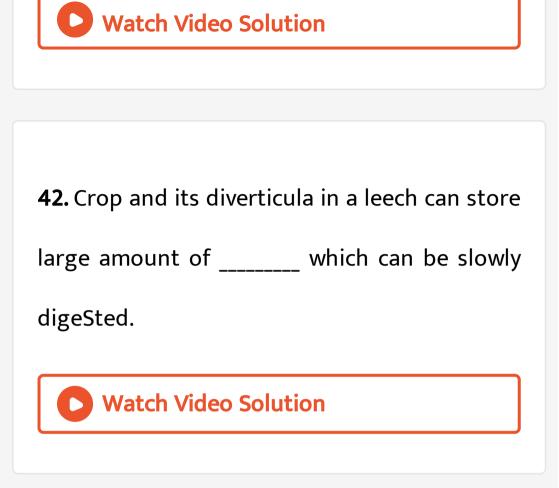
stomach by _____ enzyme.







41. In rabbit a pair of testes are enclosed by



43. Biochemical substances derived from leech

saliva can treat _____.

44. How does the entry of food particle into

trachea is prevented when swallowing ?

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each segment in leech.

46. _____ movement of a leech is brought about by contraction and relaxation of muscles.



47. The existence of two sets of teeth in the li

fe of an animal is called _____ dentition.

48. The digestive system of a leech includes

the long alimentary canal and the _____



49. The right auricle opens into the right

ventricle by _____ aperture in rabbit.



50. _____ is a mid ventral opening situated between second and third annuli of 10th segment.

A. male genital pore

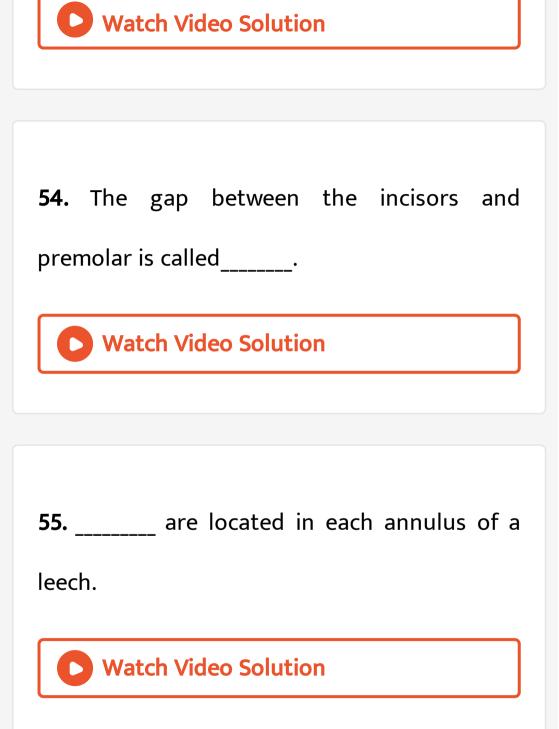
B. epididymis

C. atrium

D. testis sac

Answer: a

51. The anterior sucker helps in
Watch Video Solution
52. During feeding, the leech attaches itself to its victim strongly by the sucker.
Watch Video Solution
53. The trunk of a rabbit bears two pairs of limbs.



56. The female genital pore lies mid ventrally between second and third annuli of ______segment.

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57. In leech, the ejaculatory ducts on both sides join to form the ______.

A. vas efferens

B. genital atrium

C. testes sacs

D.	prostate	glands
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Answer: b

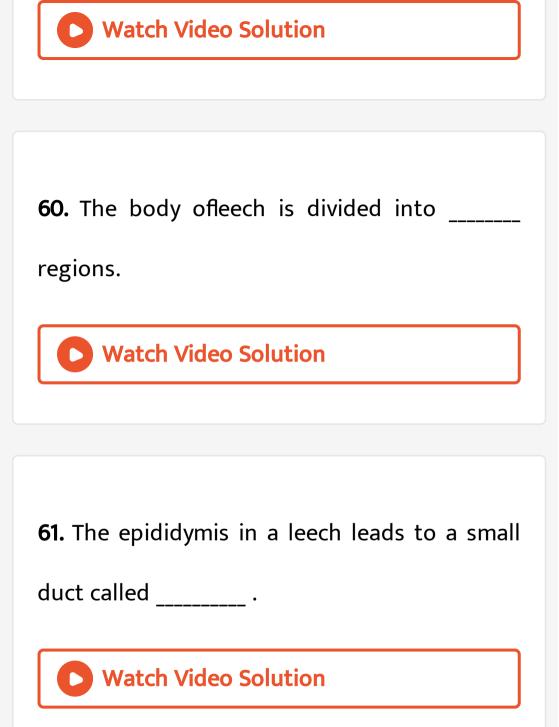
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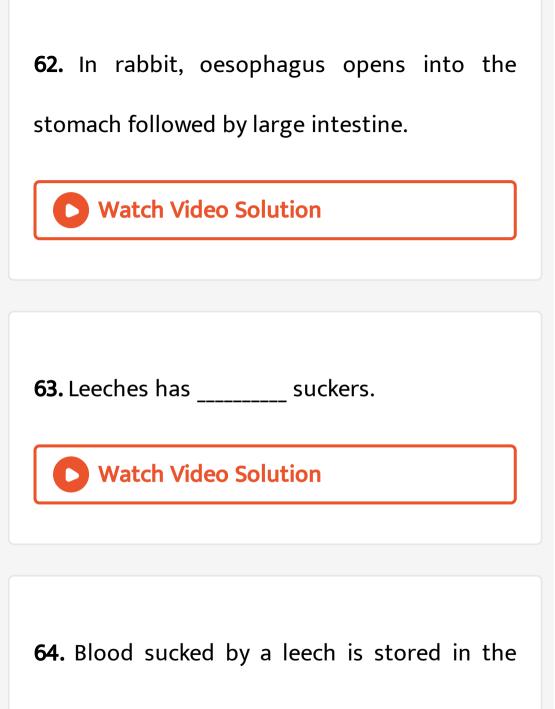
58. The _____ lies in the middle of the

anterior sucker in leech.

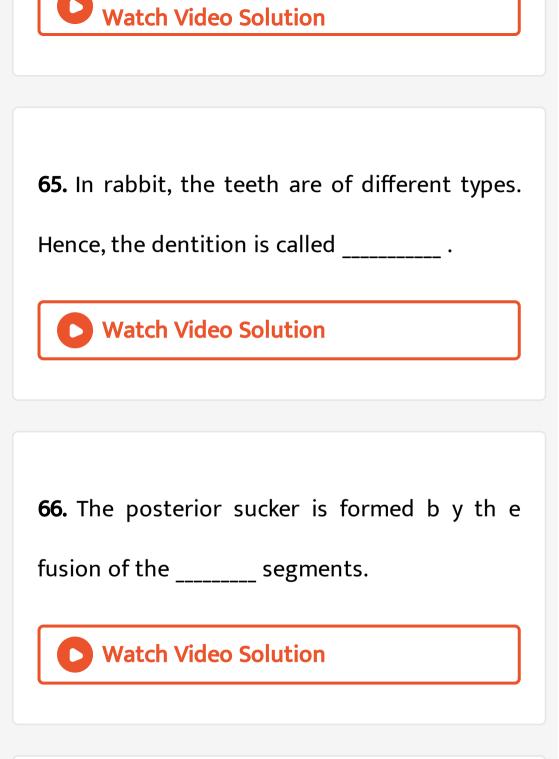
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59. Rabbits belong to phylum _____.

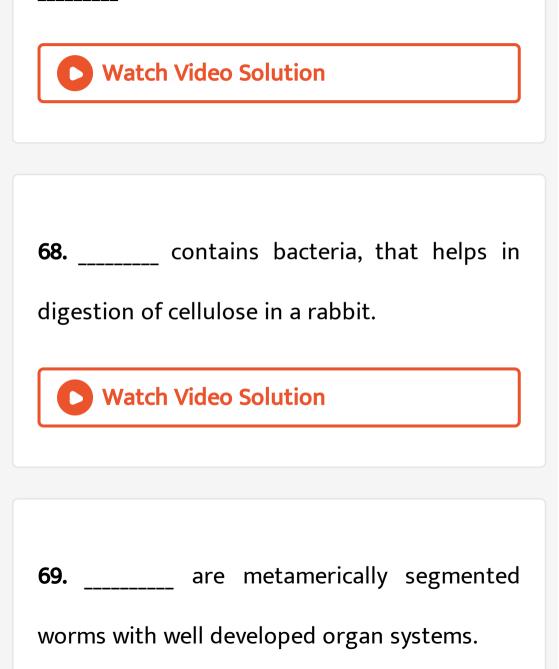


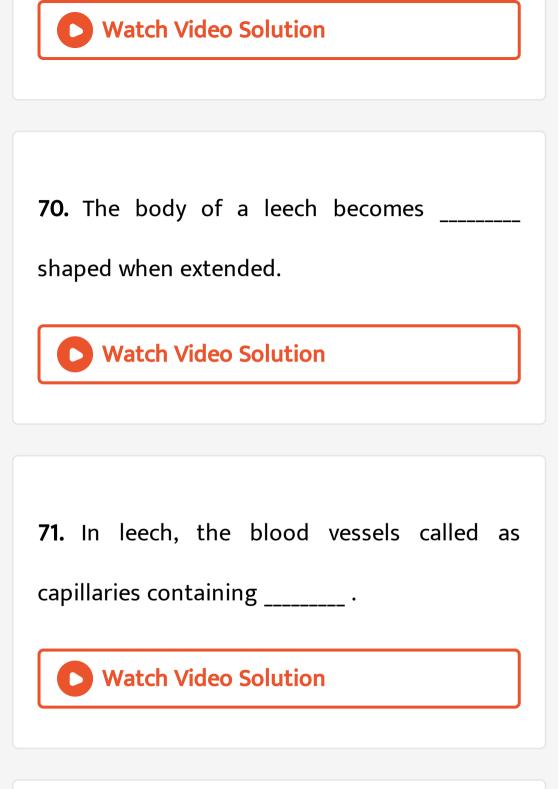






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72. Mention any two important characteristic

features of mammals.



73. Blood, blood vessels and heart forms the



74. The male genital pore of a leech is situated between the 2nd and 3rd annuli of the _____ segment.



75. The mouth ofleech is a _____ aperture

situated in the middle of the anterior sucker.



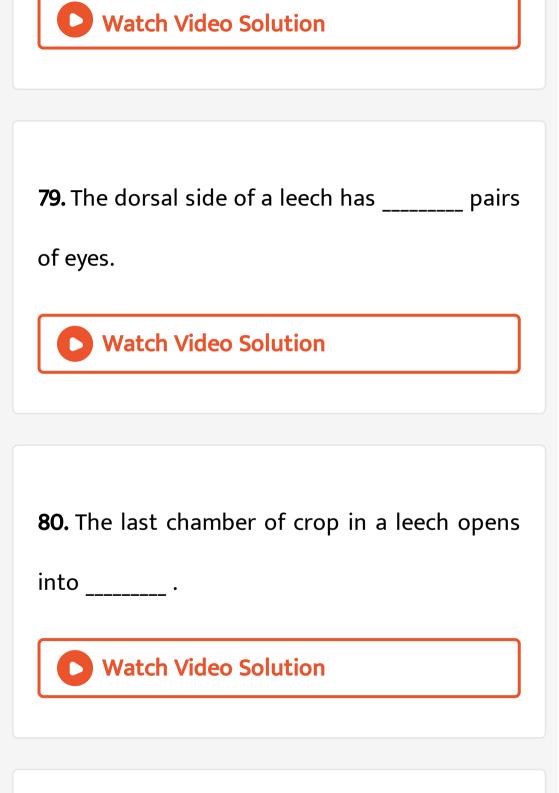
76. Leeches are effective in breaking up _____. Watch Video Solution

77. In a rabbit, the right and left auricles are

separated by_____.

Watch Video Solution

78. Leeches are _____ in nature.



81. The nerve ring surrounds the pharynx and

is formed of suprapharyngeal ganglion (brain),

and	



82. The autonomic nervous system comprises

of sympathetic and _____ nerves.



83. _____ is a technique of bleeding in a patient to remove toxic impurities from the body caused due to leech bite.



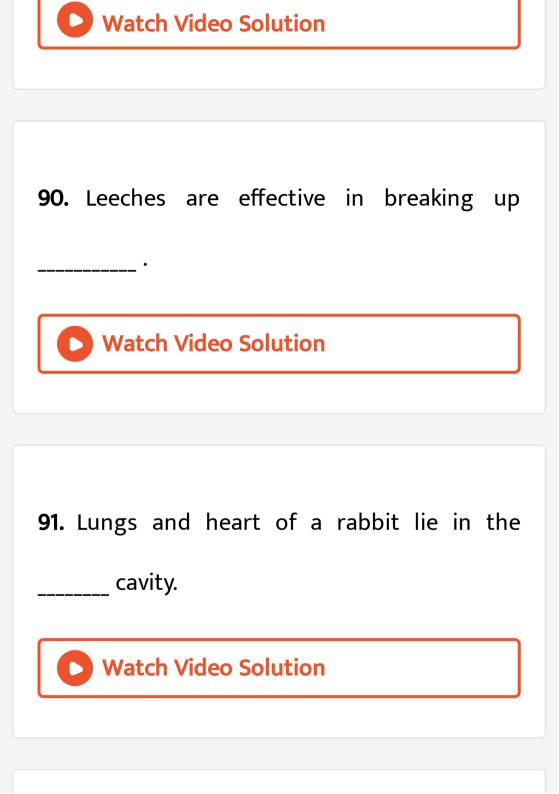
84._____ is a thin walled sac in the junction

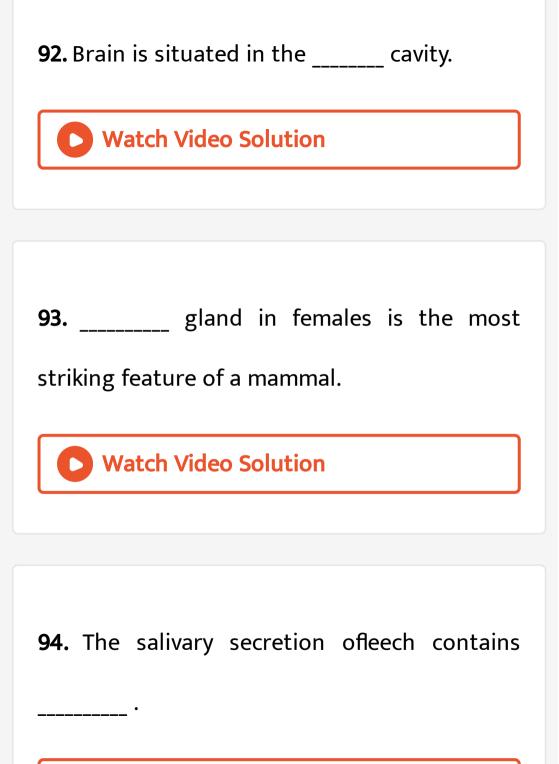
of small intestine and large intestine of rabbit.

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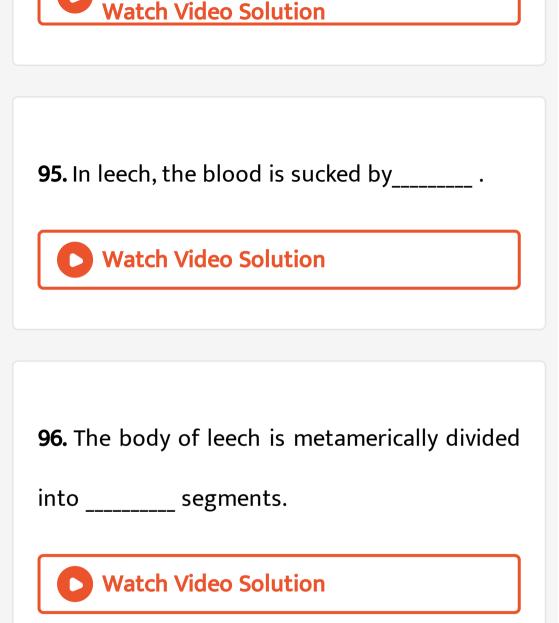
85.	is	the	simple	method	of	
representing the teeth of a mammal.						
Watch Video Solution						
86. The central nervous system of a rabbit consists of and						
Watch V	ideo	Solut	ion			

87. occupy the highest group in the				
animal kingdom.				
Watch Video Solution				
88. Each lungs is enclosed by a double membraneous in rabbit.				
Watch Video Solution				
89. The bronchioles end in				









97. The _____ consists of a pair of olfactory

lobes, cerebral hemispheres and diancephalon.



98. A cocoon in leech contains

embryos.

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Additional Questions Answers Match The Following

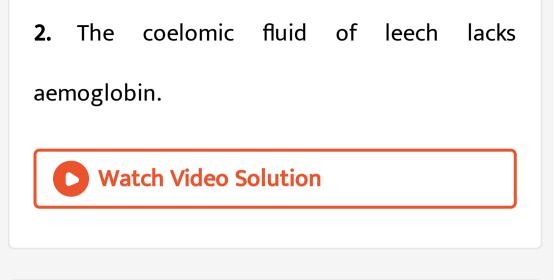




Additional Questions Answers State Whether The Following Statements Are True Or False Correct The False Statement

1. Leeches do not have true blood vessels.

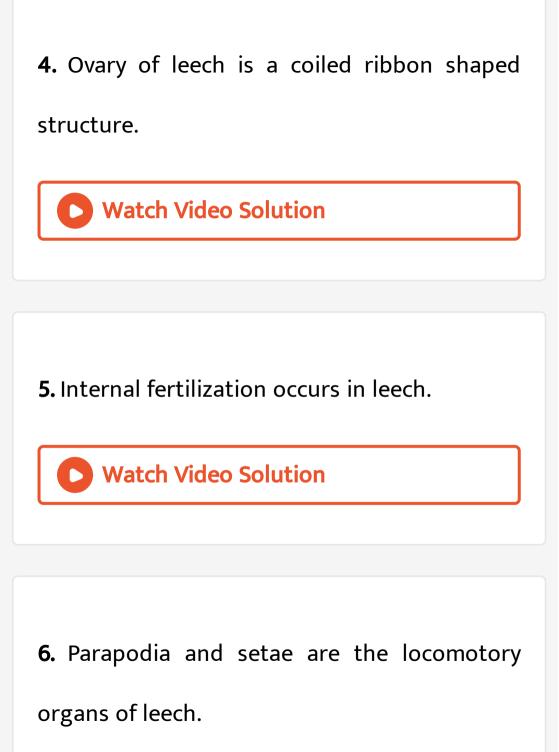
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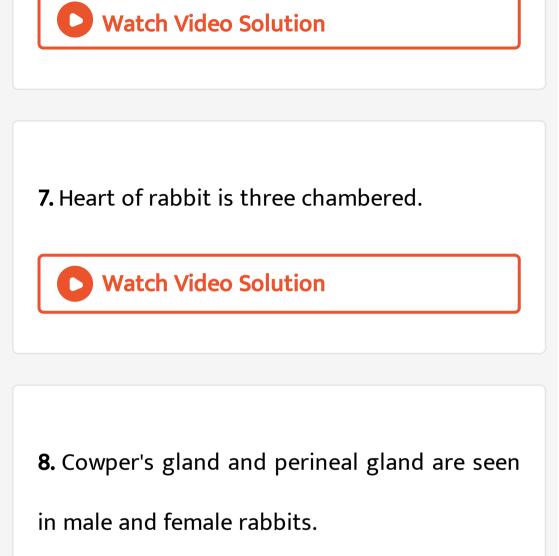


3. Mammals are less developed group of

animals in the animal kingdom.









9. In leech, excretion takes place by segmentally arranged paired tubules called kidney.



10. In rabbit, breathing movements are brought by the movement of the diaphragm.



11. In rabbit, oesophagus opens into the stomach followed by large intestine.
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12. In rabbit, each lung is enclosed by a double

membranous pleura.



13. A pair of Cowper's gland and perineal gland

are the accessory glands present in the male reproductive system of Rabbit.



14. Canine are present in rabbit.



Additional Questions Answers Assertion And Reason **1.** Assertion: Rabbit is a herbivorous animal.

Reason: Canines are absent in rabbit.

A. Both Assertion and Reason are true and

Reason is correct explanation of

Assertion.

B. Both Assertion and Reason are true but

Reason is not the correct explanation of

Assertion.

C. Assertion is true but Reason is false.

D. Both Assertion and Reason are false.

Answer: A

Watch Video Solution

2. Assertion: Blood is the food offeech.
Reason: It has a haemocoelic fluid with haemoglobin.

A. Both Assertion and Reason are true and

Reason is correct explanation of

Assertion.

B. Both Assertion and Reason are true but

Reason is not the correct explanation of

Assertion.

- C. Assertion is true but Reason is false.
- D. Both Assertion and Reason are false.

Answer: B

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3. Asseration : In adult rabbit, the excretory and genital system become inter connected.`
Reason : Sexual dimorphism is seen in rabbit.

A. Both Assertion and Reason are true and

Reason is correct explanation of Assertion.

B. Both Assertion and Reason are true but

Reason is not the correct explanation of

Assertion.

C. Assertion is true but Reason is false.

D. Both Assertion and Reason are false.

Answer: B

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4. Assertion: Skin ofleech is kept moist and slimy.

Reason : It is due to secretion of mucus which

also prevents it from drying

A. Both Assertion and Reason are true and

Reason is correct explanation of Assertion.

- B. Both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
- C. Assertion is true but Reason is false.
- D. Both Assertion and Reason are false.

Answer: A



5. Assertion: No true blood vessels are seen in Leech.

Reason: The blood vessels. are replaced by haemocoelic channels or canals filled with blood like fluid.

A. Both Assertion and Reason are true and

Reason is correct explanation of

Assertion.

B. Both Assertion and Reason are true but

Reason is not the correct explanation of

Assertion.

C. Assertion is true but Reason is false.

D. Both Assertion and Reason are false.

Answer: A

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6. Assertion: Mouth is a transverse slit bounded by upper and lower lips.

Reason: It leads into the buccal cavity.

A. Both Assertion and Reason are true and

Reason is correct explanation of Assertion.

B. Both Assertion and Reason are true but

Reason is not the correct explanation of

Assertion.

C. Assertion is true but Reason is false.

D. Both Assertion and Reason are false.

Answer: A

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7. Assertion : The secretions of digestive glands help in digestion of food in the alimentary canal.

Reason : Teeth are hard bone - like structures used to cut, tear and grind food materials. A. Both Assertion and Reason are true and

Reason is correct explanation of Assertion.

- B. Both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
- C. Assertion is true but Reason is false.
- D. Both Assertion and Reason are false.

Answer: B



8. Assertion: The gap between the canines and premolar is called diastema.

Reason: It helps in mastication and chewing of food in herbivorous animals.

A. Both Assertion and Reason are true and

Reason is correct explanation of

Assertion.

B. Both Assertion and Reason are true but

Reason is not the correct explanation of

Assertion.

C. Assertion is true but Reason is false.

D. Both Assertion and Reason are false.

Answer: A

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9. Asseration :Tracheal walls are supported by rings of cartilage. It helps in the free passage of air .

A. Both Assertion and Reason are true and

Reason is correct explanation of Assertion.

- B. Both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
- C. Assertion is true but Reason is false.
- D. Both Assertion and Reason are false.

Answer: A



Additional Questions Answers Analogy Type Question Identify The First Words And Their Relationship And Suggest A Suitable Word For The Fourth Blank

1. Lungs : Pleura:: Heart : _____ .

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2. Leech : Nephridia :: Rabbit : _____



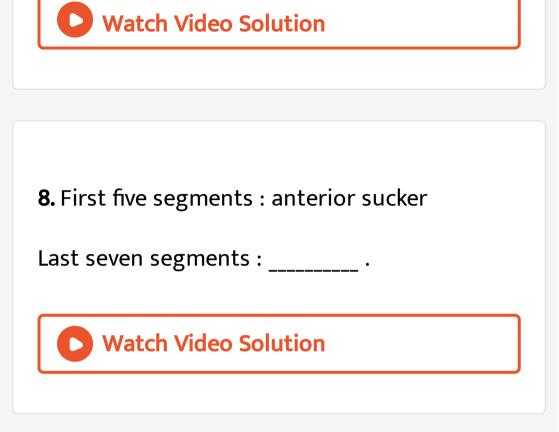


4. Cranial nerves: 12 pairs:: Spinal nerves:

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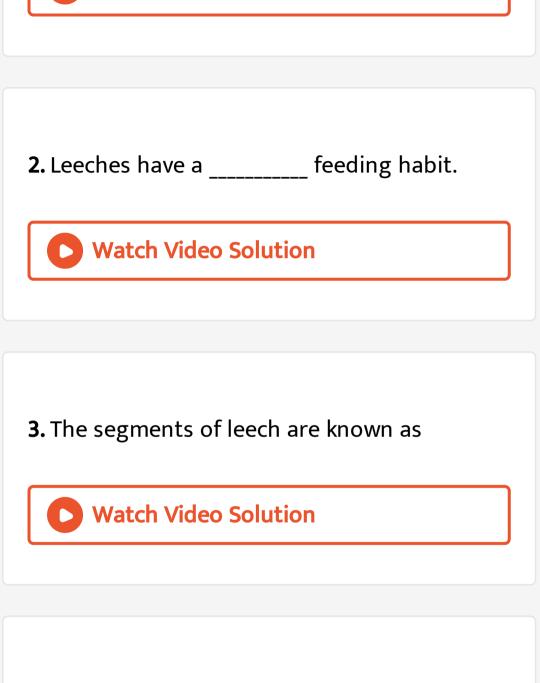
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5. Forebrain: Prosencephalon :: Midbrain:	
·	
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6. Pre caval : Superior vena cava	
Post caval:	
Watch Video Solution	
7. Outer: Duramater :: Inner:	



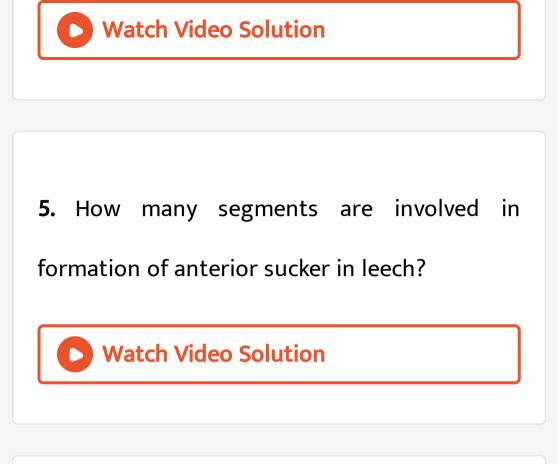
Additional Questions Answers Answer In A Word Or Sentence

1. Class to which rabbits belong.



4. Temporary structure formed in segments 9 -

11 of leech.



6. Functions of anterior sucker of leech.

7. Excretory organ of leech.



8. Tissue found below longitudinal muscles in

leech.

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9. Number of chambers found in crop of leech?

10. Parts of alimentary canal in leech where blood is stored.

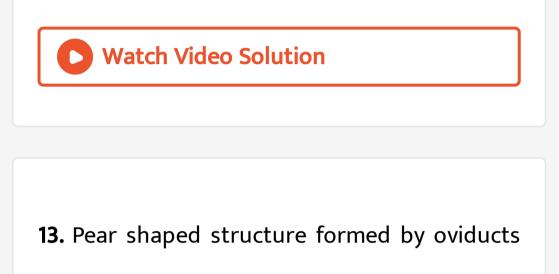


11. Type of mark made in the skin of a person

bit by a leech.



12. Explain Circulatory system of leech.

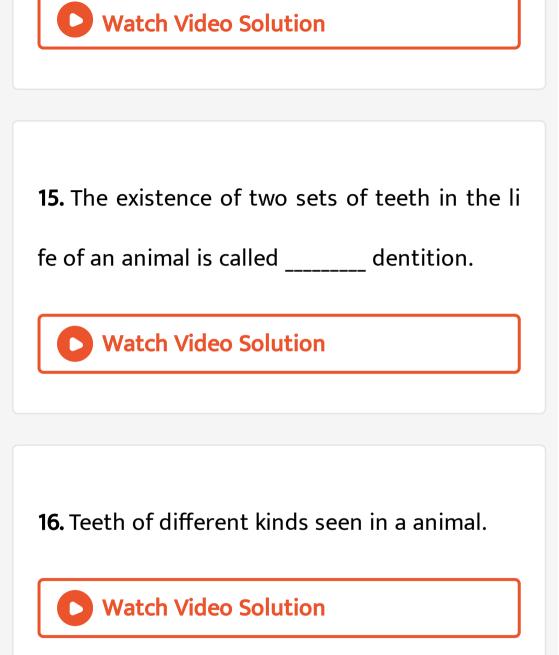


in leech.

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14. Write about embryonic development in

leech.



17. Write the dental formula of rabbit.



18. Name the type of teeth which is absent in

rabbits.

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19. _____ contains bacteria, that helps in

digestion of cellulose in a rabbit.

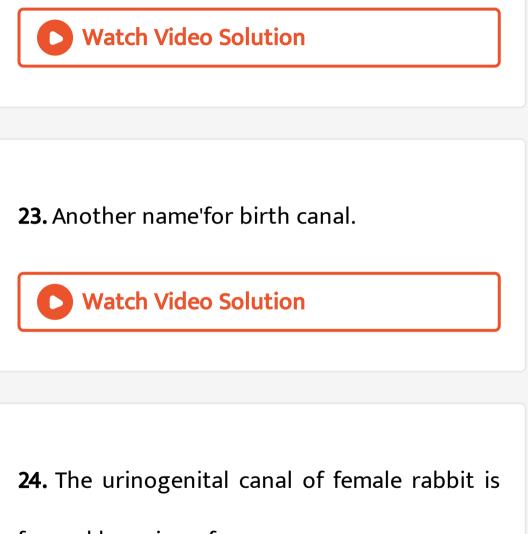


20. A structure which prevents food from entering the trachea in rabbits.

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21. Shape ofheart in rabbit.

22. Type of kidneys in rabbit.



formed by union of _____

25. The gap between the incisors and premolar

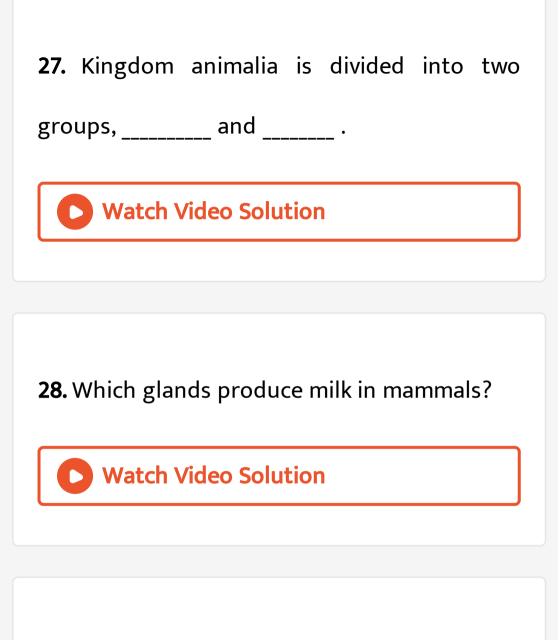
is called_____.



26. List any one of the Characteristic feature of

Phylum Annelida.





29. Which sucker helps in feeding?

30. Which teeth helps to cut the food materials in Rabbit?



31. Which teeth helps in grinding of the food

materials in Rabbit?



Additional Questions Answers Give Reasons For The Following Statements

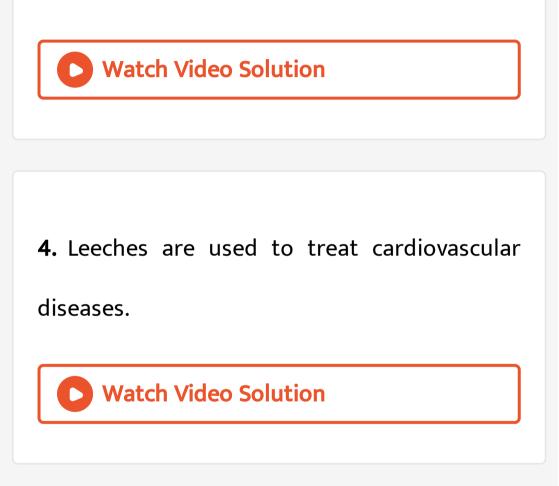
1. Leech is a hermaphrodite.

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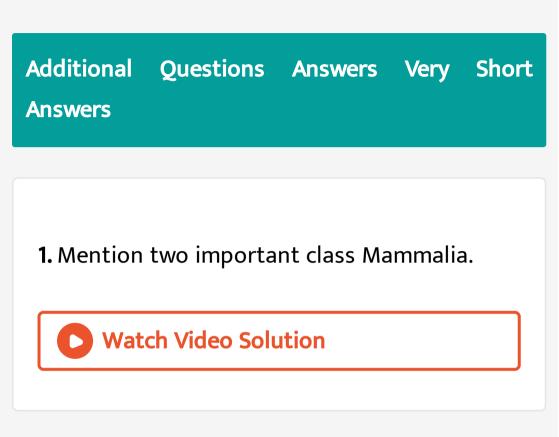
2. Leeches do not have an elaborate secretion

of digestive juices and enzymes - Why?

3. Leeches do not have true blood vessels.

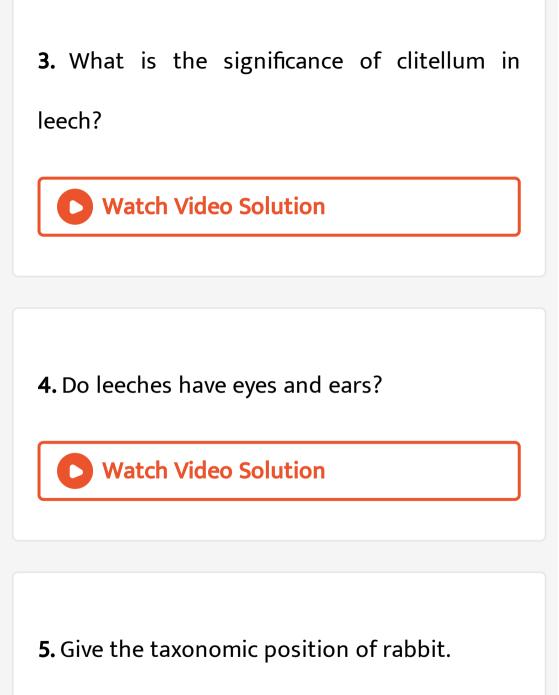


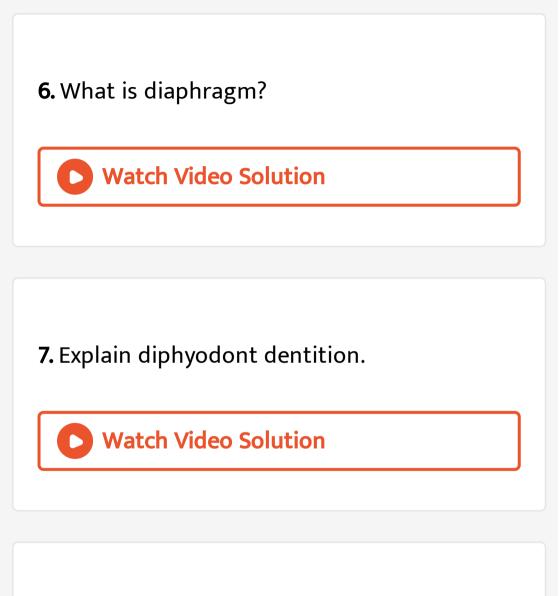
5. Leeches are very good anaesthetist.



2. Give the taxonomic position of Indian cattle

leech.





8. What is heterodont dentition ?

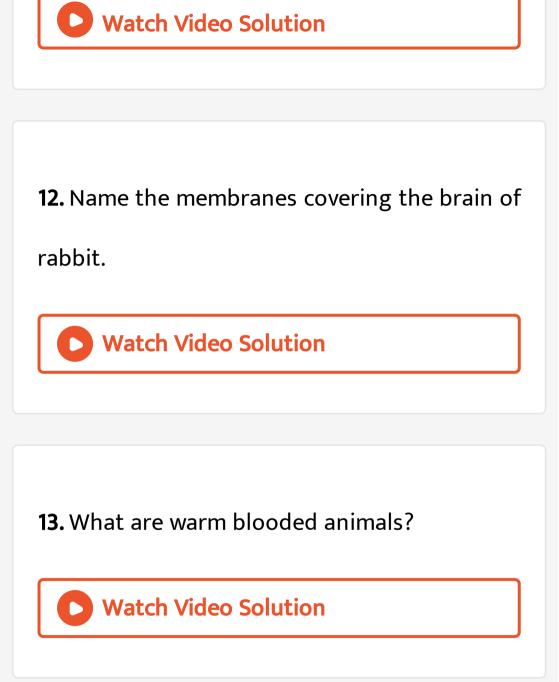
9. What is diastema?

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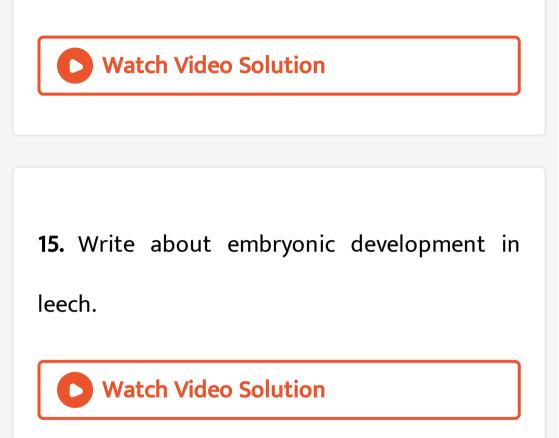
10. What is the significance of caecum in rabbit?

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11. What is Dental formula ?

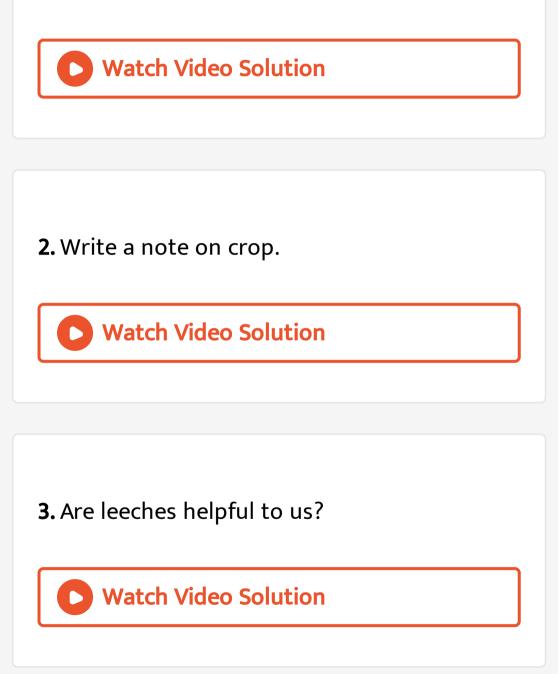


14. Write a few lines about excretion in leech.



Additional Questions Answers Short Answers

1. Write about the suckers in leech.



4. Draw the digestive system of leech and label

the parts.



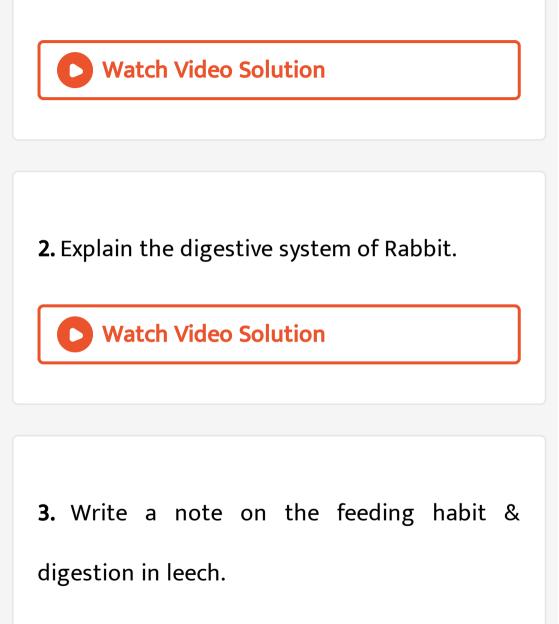
5. Draw the dorsal view of brain of rabbit &

label the parts.

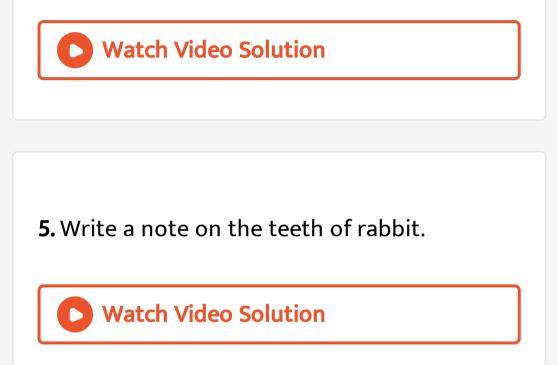


Additional Questions Answers Long Answers

1. Shape ofheart in rabbit.



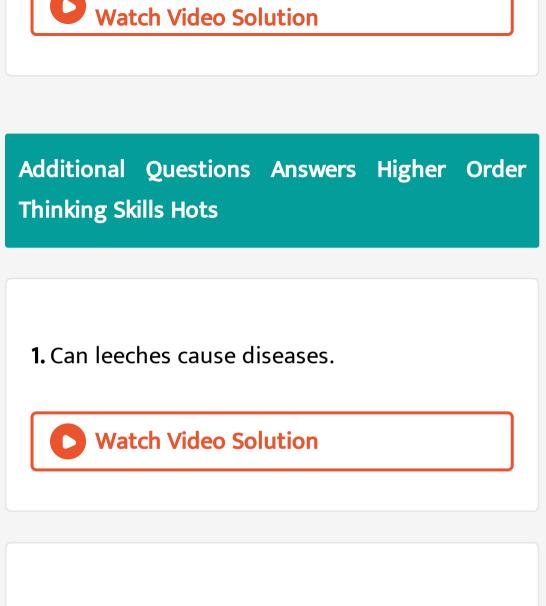
4. Explain respiratory system of a rabbit.



6. Write a note on female reproductive system

of rabbit.





2. Why does a leech die, if you put some salt

on it?



Additional Questions Answers Value Based Questions

1. Man is a niammal and has incisors and canine. Rabbits are mammals but lack canines. Explain.



2. Is hirudin used in medical science



