

India's Number 1 Education App

### **BIOLOGY**

## BOOKS - KUMAR PRAKASHAN KENDRA BIOLOGY (GUJRATI ENGLISH)

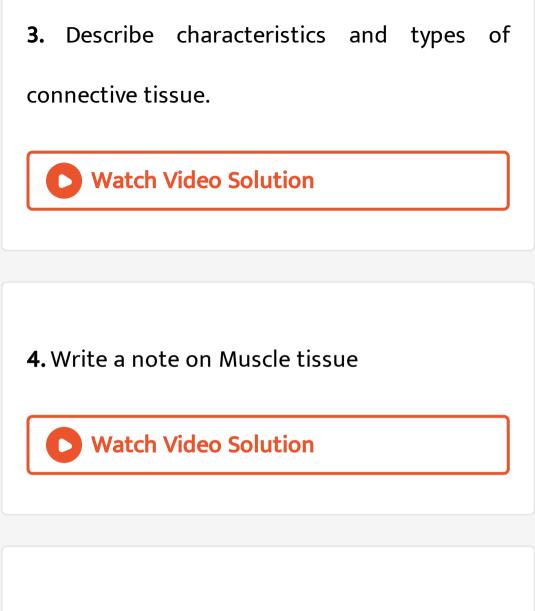
# STRUCTURAL ORGANISATION IN ANIMALS

Section A Exam Oriented Questions Answers From Darpan 1. How the biological functions of living organisms are carried out ?
View Text Solution

2. Write a detailed note on Epithelial tissue

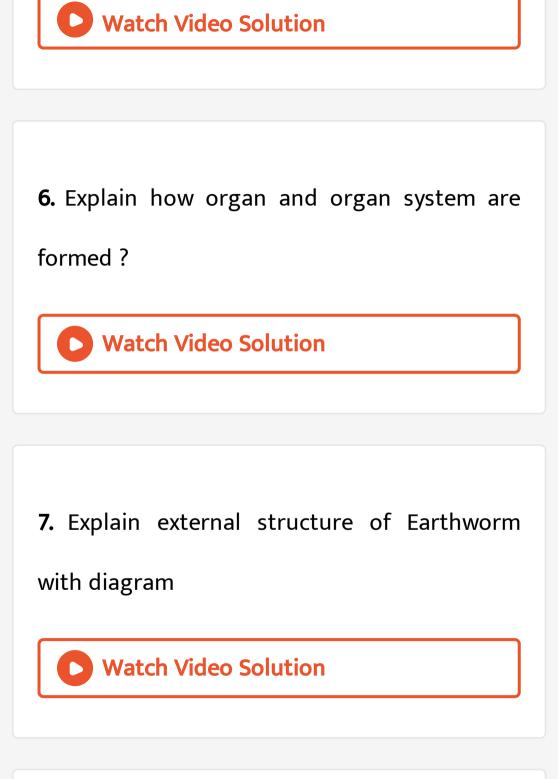
giving types of animal tissue.





5. Write a note on Nervous tissue or Neural

tissue

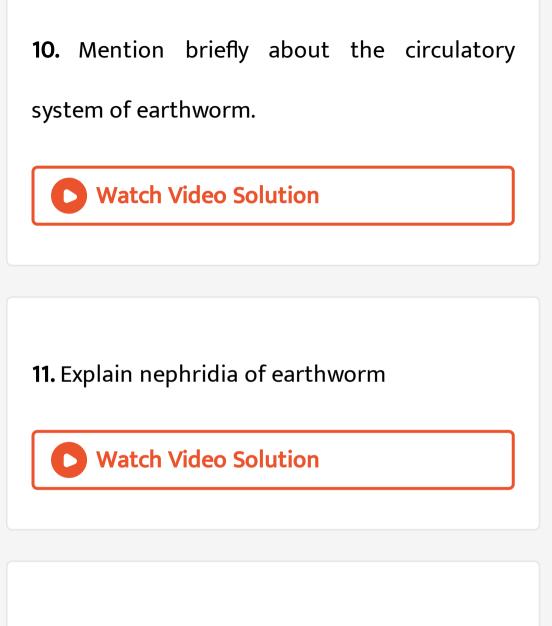


8. Describe anatomy of body of Earthworm in

short



**9.** Explain digestive tract of earthworm with diagram.



12. Describe nervous system of earthworm

13. Which are sensory organs of earthworm ?

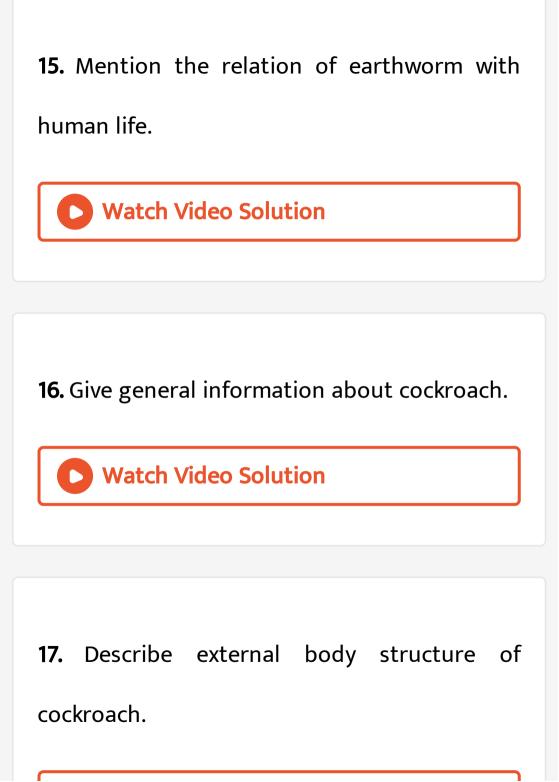
Give their function

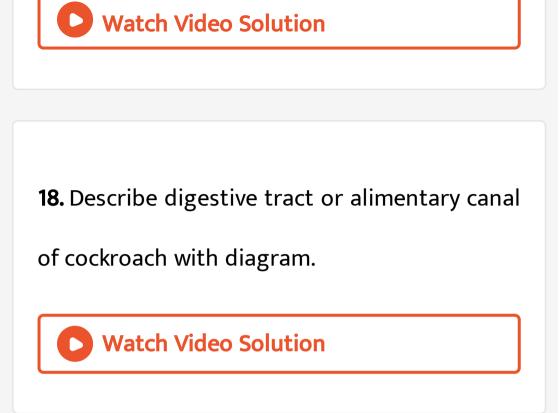


#### 14. Describe structure of reproductive system

of earthworm with diagram.



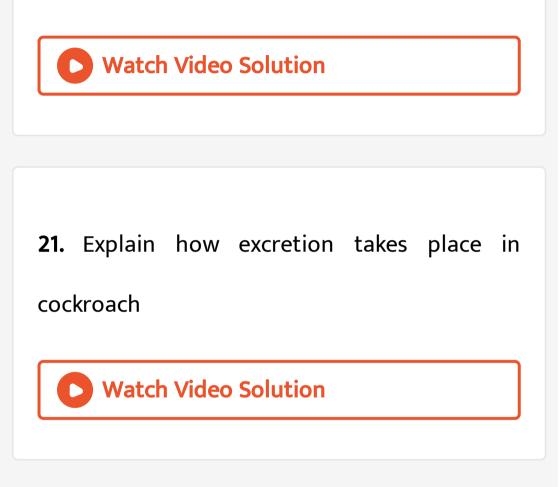




### **19.** Describe circulatory system of cockroach.



20. Describe respiratory system of cockroach



**22.** Explain nervous system of cockroach.

**23.** Describe reproductive system of female cockroach and process of fertilization with diagram

Watch Video Solution

24. Explain : Cockroach is harmful for human

beings

25. Give common information about Frog.

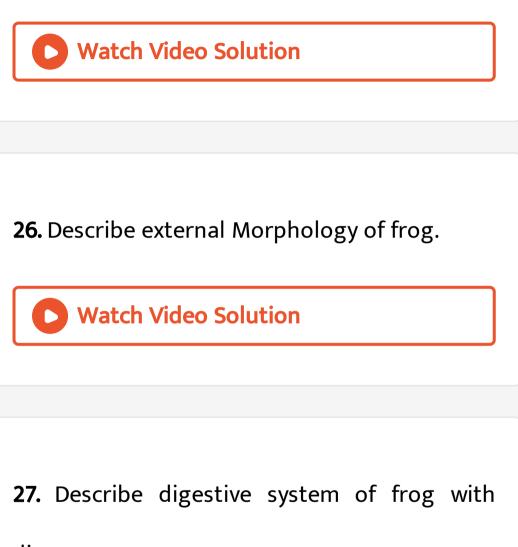
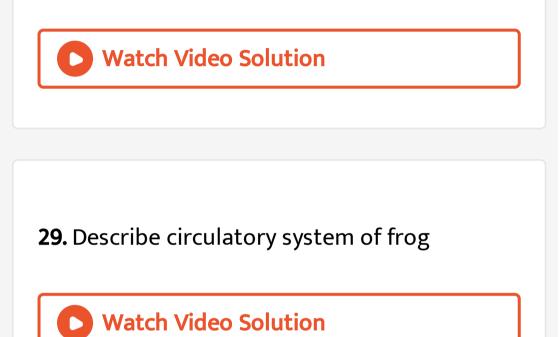


diagram.



**28.** Explain respiration in frog.



**30.** Describe excretory system of frog.

**31.** How control and co-ordination occur in frog ? Explain.



32. Explain about nervous system of frog.

Watch Video Solution

**33.** Describe sensory organs of frog.





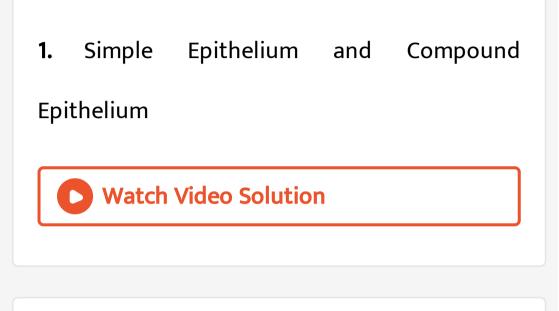
34. Explain reproductive system of frog with

diagram.



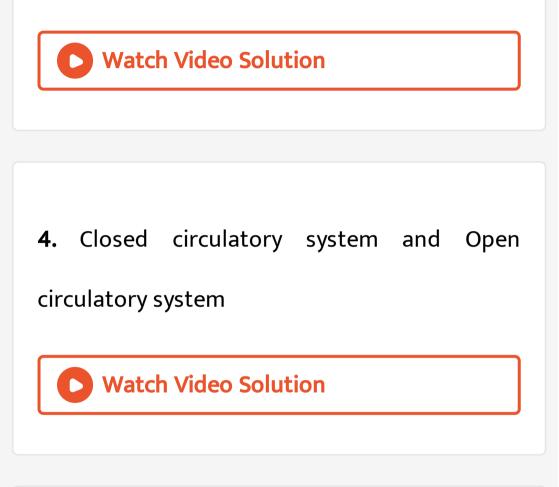
#### 35. Mention the relation of frog with Human

life



2. Cartilagenous tissue and Bone tissue

3. Non-striated muscle and striated muscle



5. MaLe Frog and Female Frog

#### **6.** Earthworm is known as farmer's friend.

Watch Video Solution

7. Frogs undergo summer sleep and winter

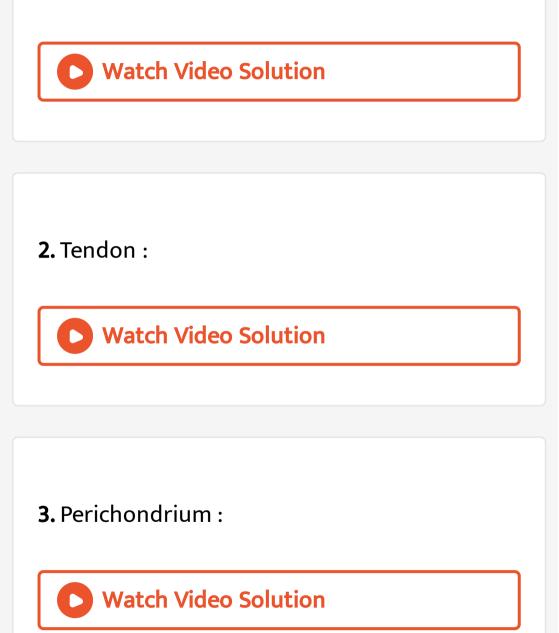
sleep (aestivation and hibernation).

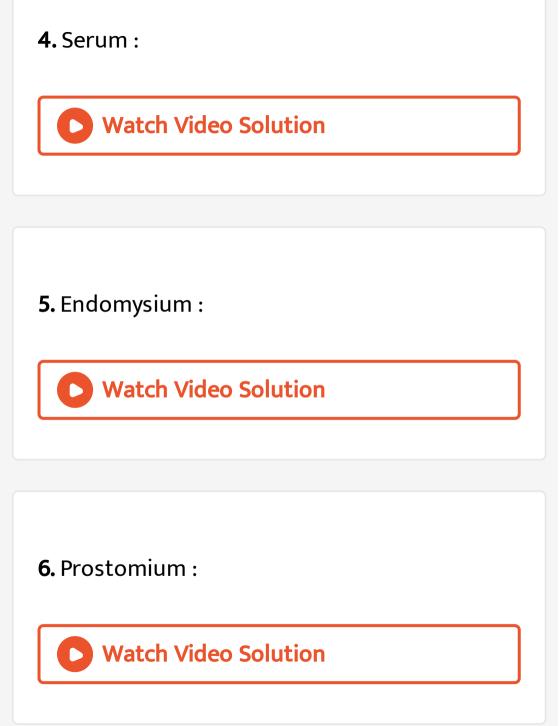
8. In cockroach well developed respiratory system is seen Watch Video Solution 9. Explain : Cockroach is harmful for human beings

**Watch Video Solution** 

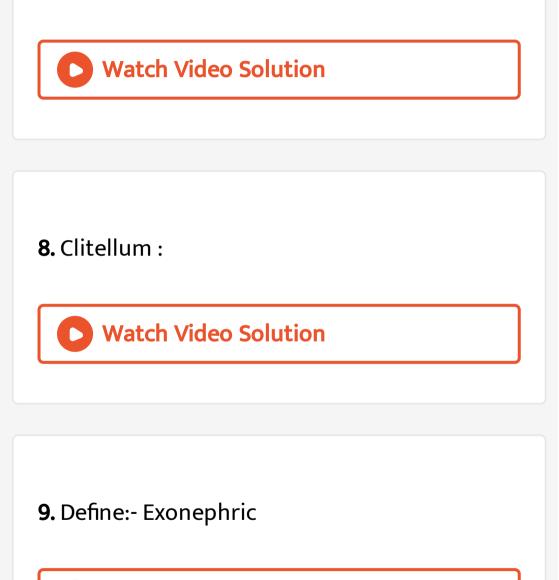
Section C Definitions Explanation Term Location Function

#### 1. Ligaments

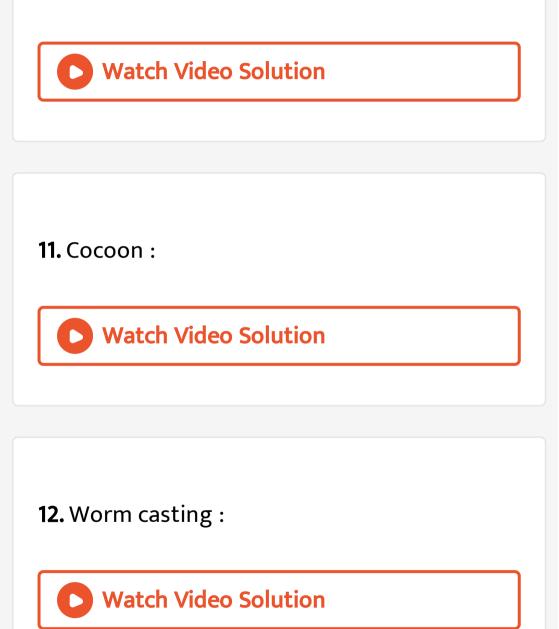




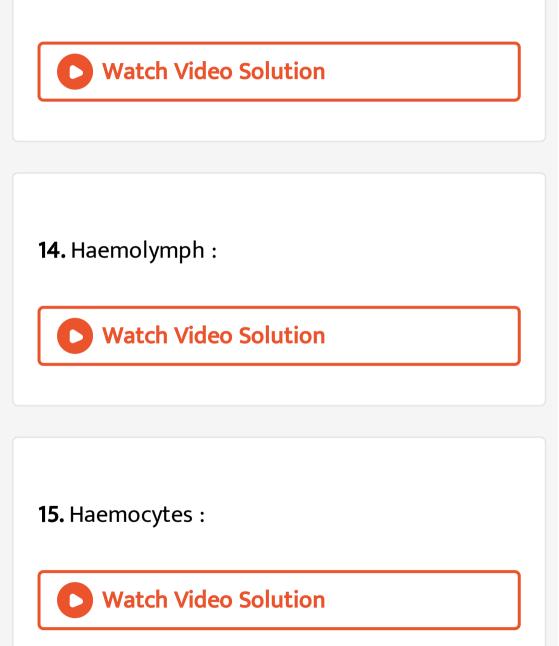


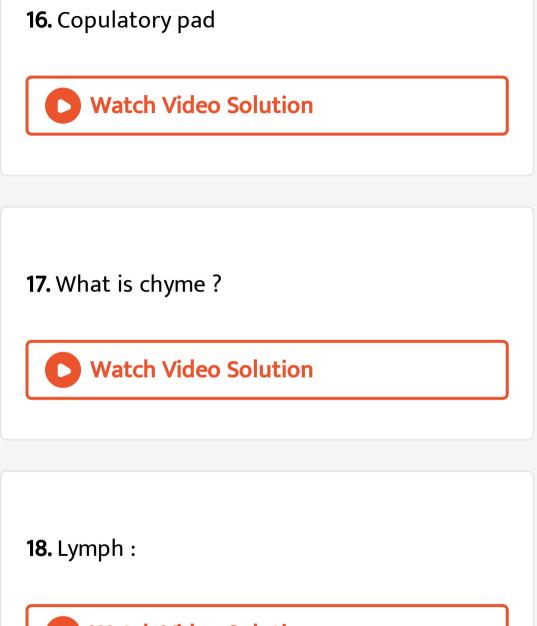


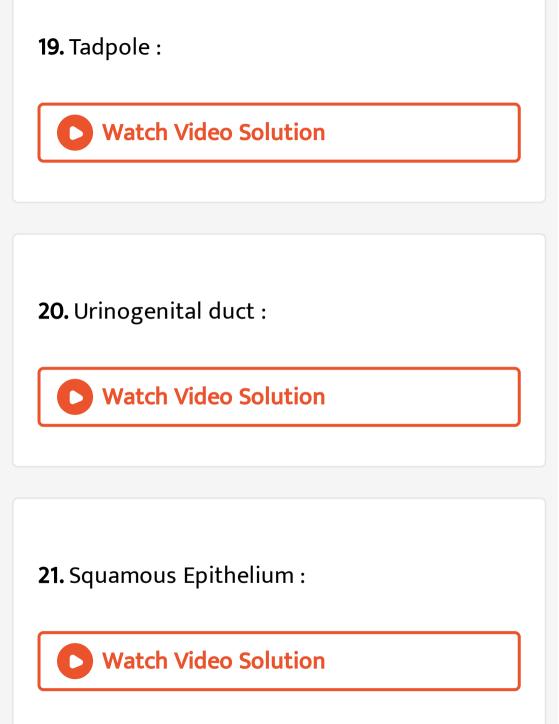
10. Define :- Enteronephric



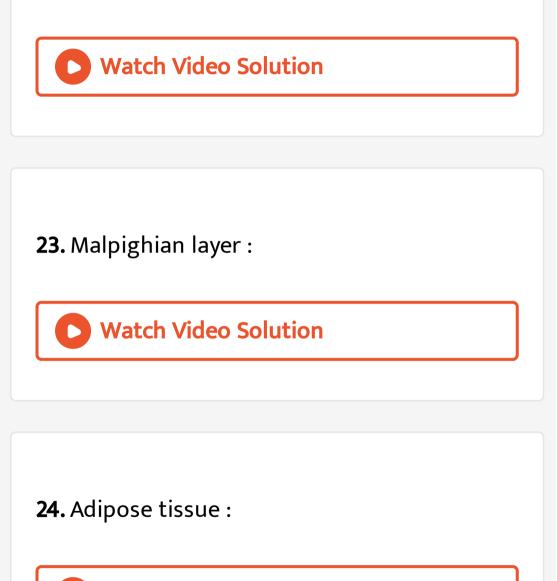
13. What is vermicasting

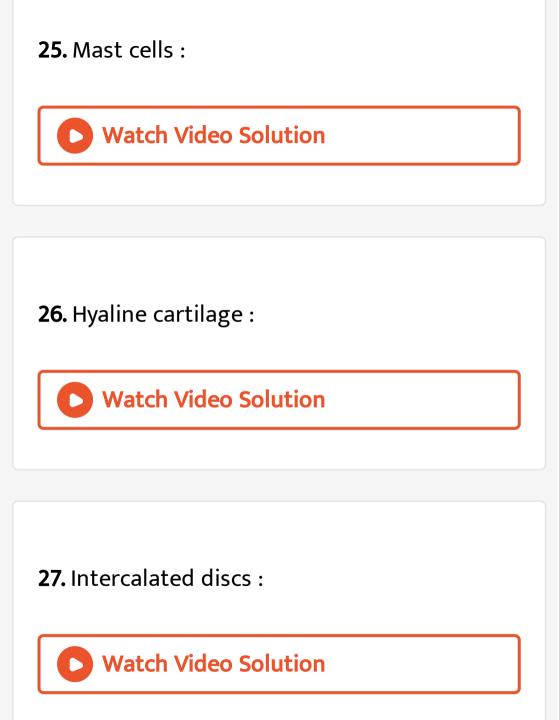


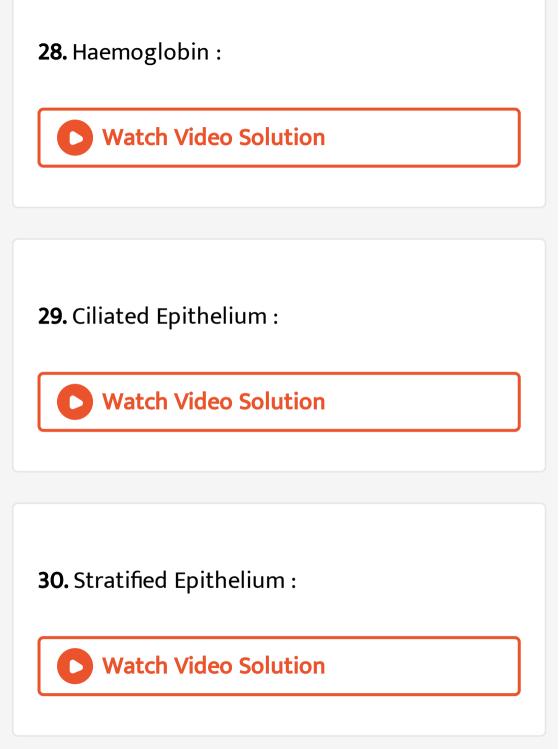


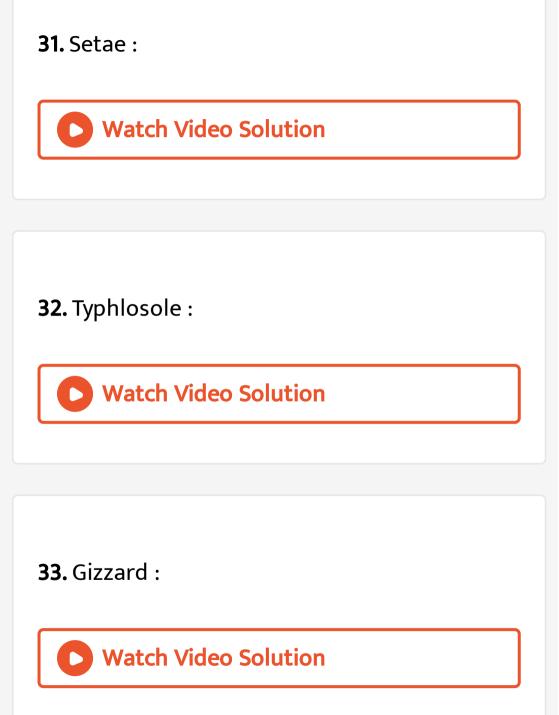


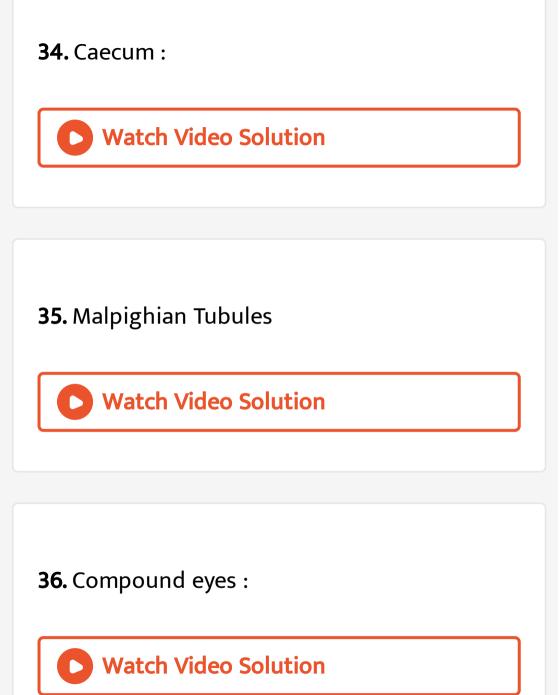
22. Cuboidal Epithelium

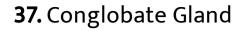


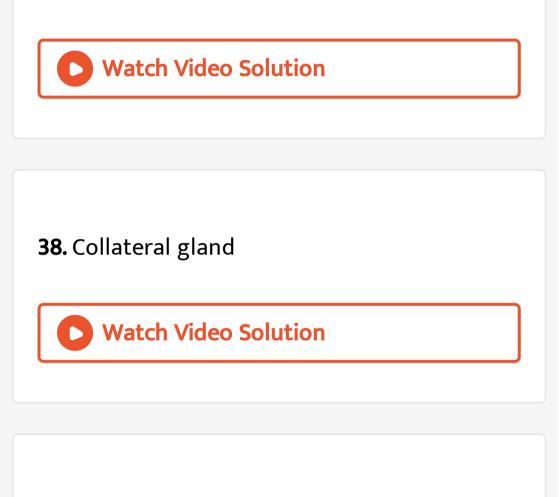












**39.** Sinus venosus :

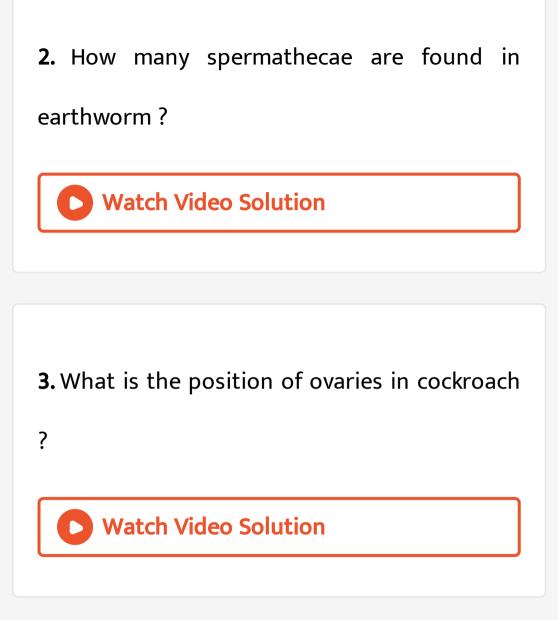
#### **40.** Cloaca :



#### Section D Textual Exercise

#### 1. Give the common name of Periplaneta

americana.



4. How many segments are present in the

abdomen of cockroach ?

Watch Video Solution

#### 5. Malpighian Tubules

Watch Video Solution

6. What is the function of nephridia

7. How many types of nephridia are found in

earthworm based on their location ?



#### 8. Draw a labelled diagram of the reproductive

organs of an earthworm



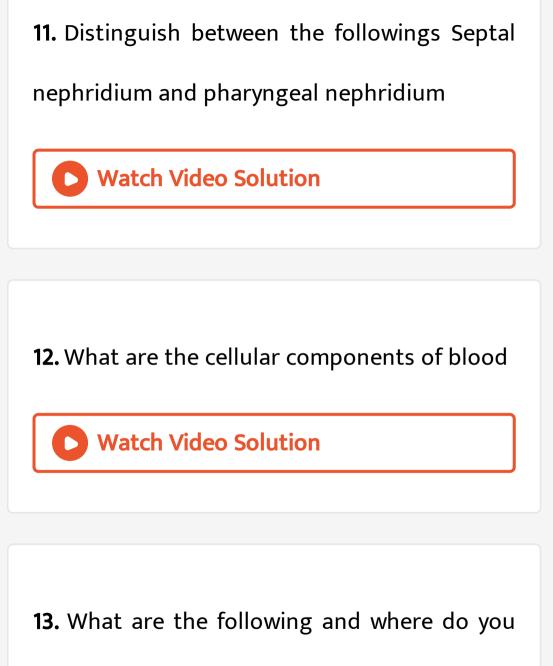
9. Draw a labelled diagram of alimentary canal

of a cockroach.

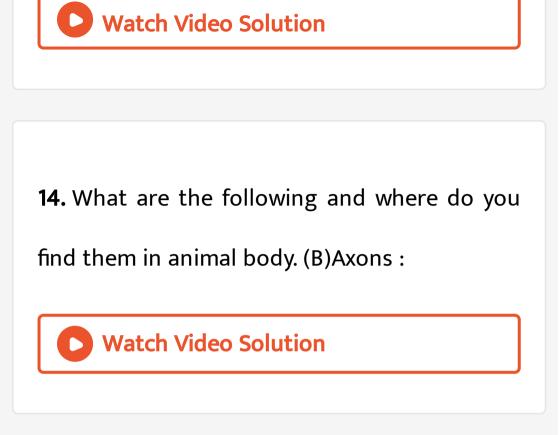
Watch Video Solution

10. Distinguish between the followings. (a)

Prostomium and peristomium



find them in animal body. (a) Chondrocytes



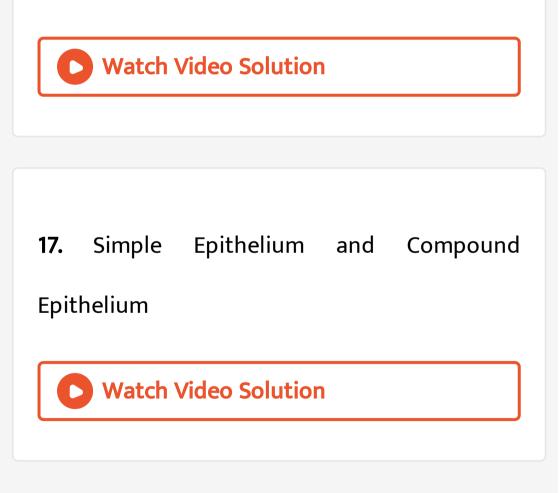
15. What are the following and where do you

find them in animal body.

(C) Ciliated epithelium :

16. Describe various types of epithelial tissues

with the help of labelled diagrams.



18. Distinguish between

Cardiac muscle and striated muscle

Watch Video Solution

## 19. Distinguish between

Dense regular and dense irregular connective

tissues

20. Distinguish between

Adipose and blood tissue

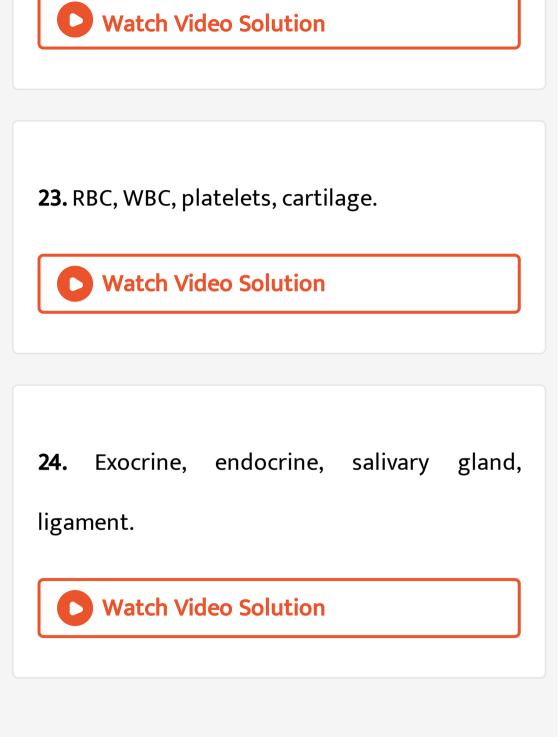
Watch Video Solution

## 21. Distinguish between

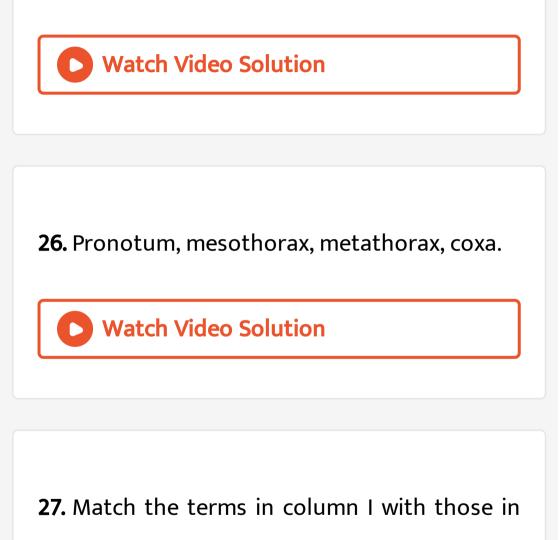
## Simple gland and compound gland

Watch Video Solution

22. Areolar tissue, blood, neuron, tendon.



25. Maxilla, mandible, labrum, antennae



column II

	Column I		Column II
(a)	Compound epithelium	(i)	Alimentary canal
(b)	Compound eye	(ii)	Cockroach
(c)	Septal nephridia	(iii)	Skin
(d)	Open circulatory system	(iv)	Mosaic vision
(e)	Typhlosole	(v)	Earthworm
( <b>f</b> )	Osteocytes	(vi)	Phallomere
(g)	Genitalia	(vii)	Bone

Watch Video Solution

**28.** Mention briefly about the circulatory system of earthworm.



29. Draw a neat diagram of digestive system of

frog.



**30.** Mention the function of the following.

Ureters in frog.



**31.** Mention the function of the following.

Malpighian tubules.

Watch Video Solution

**32.** Mention the function of the following.

Body wall in earthworm.

Watch Video Solution

Section E Solution Of Ncert Exemplar Multiple Choice Questions 1. Which one of the following types of cell is involved in making of the inner walls of large blood vessels ?

(A) Cuboidal epithelium

(B) Columnar epithelium

(C) Squamous epithelium

(D) Stratified epithelium

A. Cuboidal epithelium

B. Columnar epithelium

C. Squamous epithelium

D. Stratified epithelium

Answer: C

Watch Video Solution

2. Which one of the following categories does

adipose tissue belong?

(A) Epithelial

(B) Connective

(C) Muscular

(D) Neural

- A. Epithelial
- **B.** Connective
- C. Muscular
- D. Neural

Answer: B



**3.** Which one of the following is not a connective tissue ?

(A) Bone

(B) Cartilage

(C) Blood

(D) Muscles

A. Bone

B. Cartilage

C. Blood

D. Muscles

Answer: D

4. The clitellum is a distinct part in the body of

earthworm, it is found in

(A) Segment 13 - 14 - 15

(B) Segment 14 - 15 - 16

(C) Segment 12 - 13 - 14

(D) Segment 15 - 16 - 17

A. Segment 13 14 - 15

B. Segment 14 15 - 16

C. Segment 12 13 - 14

D. Segment 15 16 - 17

#### Answer: B



5. Setae help in locomotion in earthworm but are not uniformly present in all the segments.
They are present in
(A) 1<sup>st</sup> segment
(B) Last segment
(C) Clitellar segment

(D)  $20^{th}-22^{nd}$  segment

A.  $1^{st}$  segment

B. Last segment

C. Clitellar segment

D.  $20^{th} - 22^{nd}$  segment

Answer: D

Watch Video Solution

6. Which one of the following statements is

true for cockroach ?

(A) The number of ovarioles in each ovary are

ten.

(B) The larval stage is called caterpillar

(C) Anal styles are absent in females.

(D) They are ureotelic

A. The number of ovarioles in each ovary

are ten.

B. The larval stage is called caterpillar

C. Anal styles are absent in females.

D. They are ureotelic

#### Answer: C





## 7. Match the followings and choose the correct

## option.

	Column - I		Column - II
(a)	Adipose tissue	(i)	Nose
(b)	Stratified epithelium	(ii)	Blood
(c)	Hyaline cartilage	(iii)	skin
(d)	Fluid connective tissue	(iv)	Fat storage

D. (a - ii), (b - i), (c - iv), (d - iii)

#### Answer: B

Watch Video Solution

## 8. Match the followings and choose the

#### correct answer.

Column - I	0=01	Column - II
Hermaphrodite	(i)	Produces blood cells and haemoglobin
Direct development	(ii)	Testis and ovary in the same animal
Chemoreceptor	(iii)	Larval form absent
Blood gland in	(iv)	Sense of chemical substances
	Hermaphrodite Direct development Chemoreceptor	Hermaphrodite(i)Direct development(ii)Chemoreceptor(iii)Blood gland in(iv)

Answer: A



## 9. Match the following with reference to

cockroach and choose the correct option.

nie I	Column-I		Column-II
(a)	Phallomere	(i)	Chain of developing ova
(b)	Gonopore	(ii)	Bundles of sperm
(c)	Spermatophore	(iii)	Opening of the ejaculatory duct
(d)	Ovarioles	(iv)	The external genitalia

#### Answer: A

Watch Video Solution

# **10.** Match the followings and choose the correct answer.

Column - I			Column - II		
(a)	Touch	(i)	Nasal epithelium		
(b)	Smell	(ii)	Foramen magnum		
(c)	Cranial nerves	(iii)	Sensory papillae		
(d)	Medulla oblongata	(iv)	Peripheral nervous system		

B. (a - ii), (b - i), (c - iv), (d - iii)





## Section E Solution Of Ncert Exemplar Very Short Answer Type Questions

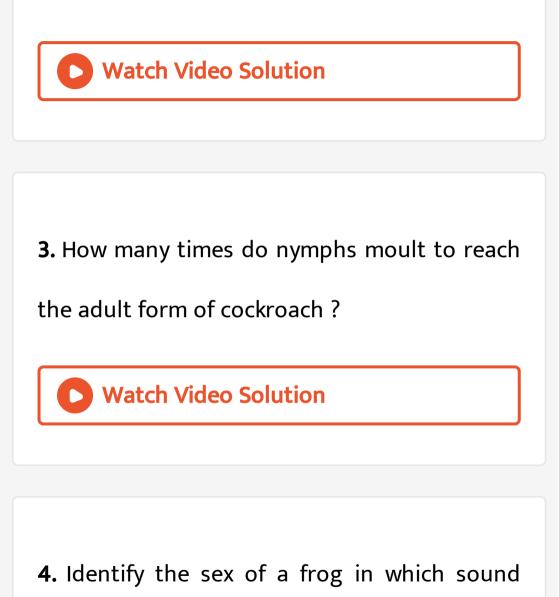
1. State the number of segments in earthworm

which are covered by a prominent dark band

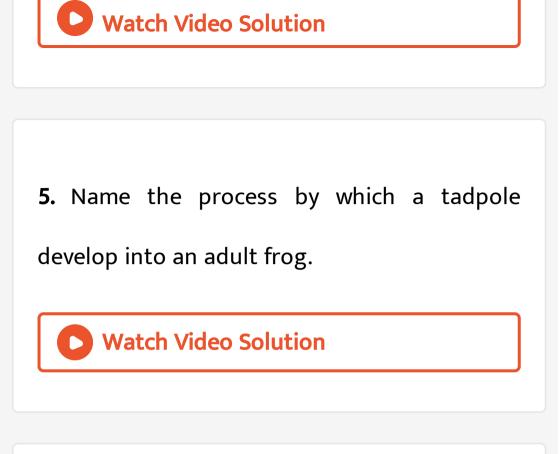
or clitellum



2. Where are sclerites present in cockroach ?



producing vocal sacs are present.



6. What is the scientific term given to

earthworm's body segments

7. A muscle fibre tapers at both ends and does

not show striations. Name the muscle fibre

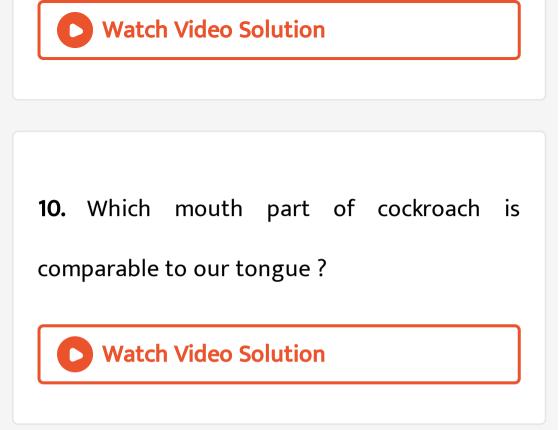


**8.** Name the different cell junctions found in tissues.

**Watch Video Solution** 

9. Give two identifying features of an adult

male frog.



**11.** The digestive system of frog is made of the following parts. Arrange them in an order beginning from mouth. Mouth, oesophagus,

buccal cavity, stomach, intestine, cloaca,

rectum, cloacal aperture



12. What is the difference between cutaneous

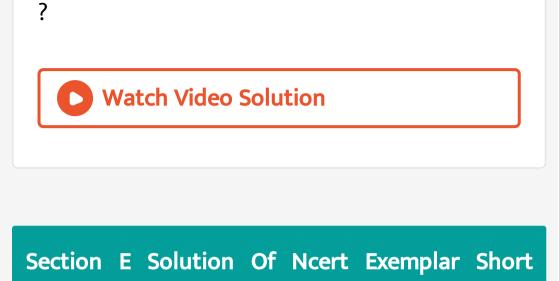
and pulmonary respiration ?

Watch Video Solution

13. Special venous connection between liver

and intestine and between kidney and

intestine is found in frog, what are they called



1. Give the location of hepatic caeca in a

cockroach. What is their function ?

**Answer Type Questions** 

2. Frogs are beneficial for mankind, justify the

statement.



**3.** The body of sponges does not possess tissue level of organisation though it is made of thousands of cells. Comment



4. Structural organisation in animals attains
different levels as cell-organ-organ system.
What is missing in this chain ? Mention the
significance of such an organisation.

Watch Video Solution

5. Stratified epithelial cells have limited role in

secretion. Justify their role in our skin.





7. Why are blood, bone and cartilage called

connective tissue ?

8. Why are neurons called excitable cells ? Mention special features of the membrane of the neuron.



9. Earthworm is known as farmer's friend.



10. How do you distinguish between dorsal

and ventral surface of the body of earthworm.

### Watch Video Solution

**11.** Correct the wrong statements among the following :

(a) In earthworm, a single male genital pore is present.

(b) Setae help in locomotion of earthworm.

(c) Muscular layer in the body wall of

earthworm is made up of only circular muscles.

(d) Typhlosole is the part of intestine of earthworm.



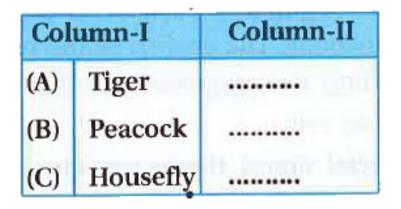
**12.** Why nephridia in earthworm that are basically similar in structure classified into

three types ? Mention the names of each.



13. Common name of some animals are given

in Column I, write their scientific name in



Watch Video Solution

**14.** Complete the following statement :

(a) In cockroach grinding of food particle is

performed by ......

(b) Malpighian tubules help in removal of......

(c) Hind gut of cockroach is differentiated into

(d) In cockroach blood vessels open into

spaces called ......

Watch Video Solution

**15.** Mention special features of eye in cockroach. Discuss compound eye in arthropods and mention its structural features.





16. Frog is a poikilotherm, exhibits camouflage

and undergoes aestivation and hibernation,

how are all these beneficial to it ?

Watch Video Solution

**17.** Write the functions in brief in column II, appropriate to the structures given in column

Column-I			Column-II	
(A)	Nictitating membrane	(1)		
<b>(B)</b>	Tympanum	(2)		
(C)	Copulatory pad	(3)		

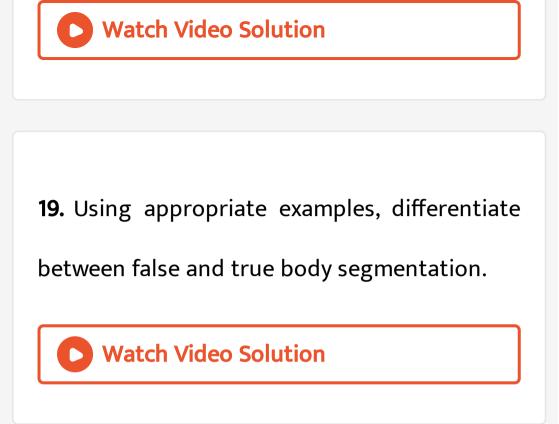
Ι.

Watch Video Solution

**18.** Write the appropriate type of tissues in column II according to the functions

mentioned in column I.

Column-I		Column-II	
(A)	Secretion and absorption	(1)	
(B)	Protective covering	(2)	
(C)	Linking and supporting	(3)	
	framework		



# 20. What is special about tissue present in the

heart ?

1. Classify and describe epithelial tissue on the

basis of structural modifications of cells.

Watch Video Solution

2. Write down the common features of the connective tissue. On the basis of structure and function. Differentiate between bones and cartilages.



**3.** Comment upon the gametic exchange in earthworm during mating. Discuss the physiology in reproduction of earthworm.

Watch Video Solution

4. Explain the digestive system of cockroach

with the help of a labelled sketch.

**5.** Draw a neat and well labelled diagram of male reproductive system of a frog.

Watch Video Solution

### **Questions From Module Important Mcq For Neet**

1. In female cockroach's genital pouch, which of

the following structures does not open ?

(A) One central oviduct

(B) Spermatheca

(C) A pair of anal cerci

(D) A pair of collateral glands

A. One central oviduct

B. Spermatheca

C. A pair of anal cercus

D. A pair of collateral glands

Answer: C

2. In which part of reproduction system of male cockroach are sperm cells stored(A) Testis

(B) Vas deferens

(C) Seminal vesicle

(D) mushroom gland

A. Testis

B. Vas deferens

C. Seminal vesicle

D. umbrellas gland

### Answer: C



**3.** Which characteristic is not of Americana Periplaneta ?

(A) Exoskeleton is made up of N-acetyl glucosamine.

(B) It possesses segmented structure.

(C) Coelom I body cavity is small coelom.

(D) During embryo development, radial and irregular division occurs.

A. Exoskeleton is made up of N-acetyl

glucoamine.

B. It possesses segmented structure.

C. Coelom I body cavity is small coelom.

D. During embryo development, radial and

irregular division occurs.

Answer: D

4. Which is the sound - sensory organ in

cockroach ?

(A) Caudal style

(B) Antennae

(C) Compound eyes

(D) Anal cercus

A. Caudal style

B. Antennae

C. Compound eyes

D. Anal cercus

#### Answer: D



**5.** How does air enter into animal body during respiration in Periplaneta Americana ?

A.  $O_2$  spreads by diffusion from spiracle of

lower thoracic region trachea, tracheal

tubes cells.

B.  $O_2$  enters in mouth, tracheal tubes and

cells of trachea.

C. Oxygen is released in spiracle of lower

thoracic region, tracheal tubes and cells

of tracheal tubes.

D. In sub pharyngeal mouth, pharynx,

tracheal tubes, tissues.

Answer: A

1. What is vermicasting

Watch Video Solution

**2.** By what name the first segment of earthworm is known ?

**3.** Give the location of genital pouch in female cockroach.

Watch Video Solution

4. What is meant by chyme

Watch Video Solution

5. What is included in fore brain of frog

6. Give names of various cells present in

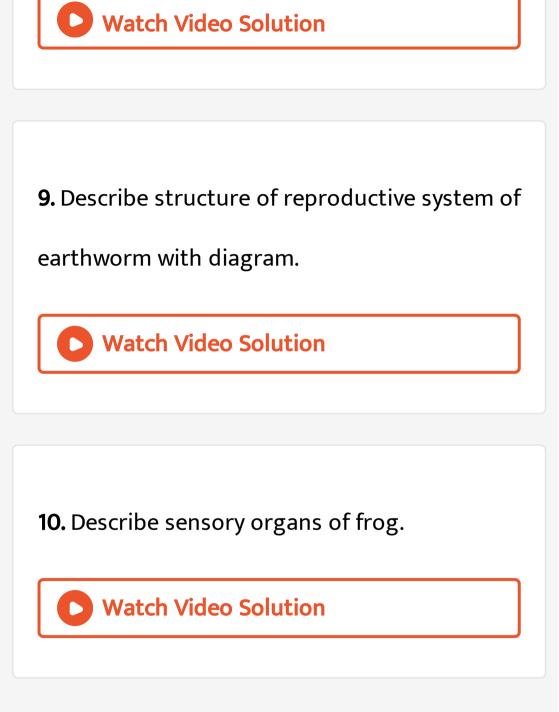
areolar tissue ?

Watch Video Solution

## 7. Squamous Epithelium :



8. Describe cardiac muscle tissue



**11.** Describe reproductive system of female cockroach and process of fertilization with diagram

