

BIOLOGY

BOOKS - MAXIMUM PUBLICATION

Structural Organisation in Animals

Exercise

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

Answer: C



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2. To which one of the following categories does adipose tissue belong?

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

Answer: B



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

B. Cartilage

C. Blood

D. Muscles

Answer: D



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4. 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

Answer: C



5. Match the following with reference to Cockroch and choose the correct option

A) Phallomere	i) Chain of developing ova
B) Ganopore	i) Bundles of sperm
C) Spermatophore	ii) Opening of the ejaculatory dust
D) Ovarioles	iv) The external genitalia

A. A-iii, B-iv, C-ii, D-i

B. A-iv, B-iii, C-ii, D-i

C. A-ivi, B-ii, C-iii, D-i

D. A-ii, B-iv, C-iii, D-i

Answer: B



6. Complete the following sentences: The most common species of frog found in India is



7. Complete the following sentences: Blood Vascular system of cockroach is......



8. Name the respiratory organs of insects.



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9. Note the relationship between the first two words and suggests a suitable word. Dendrons

: Dendrites , Axon :





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11. Which among the following is the bone cell (Leukocyte, Chondrocyte, Osteocyte, Thrombocyte).



12. Earthworm, segments 14-16 are covered by a prominent dark band of glandular tissue called (Setae, Clitellum, Typlosole, None of these)



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13. Neuroglia make up more than one half the volume of neural tissue in our body'. Write the function of neuroglial cells



14. Earthworm, segments 14-16 are covered by a prominent dark band of glandular tissue called (Setae, Clitellum, Typlosole, None of these)

- A. 12 16
- B.14 16
- C.10 14
- D.16 18

Answer: B



15. make up more than one half the volume of neural tissue in our body.



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16. Which epithelial tissue is present in the tubular parts of nephrons in kidneys?



17. Heart is made of

- A. Epithelial tissue and Muscular tissue.
- B. Muscular tissue and neural tissue.
- C. Muscular tissue and connective tissue.
- D. All the four types of tissues.

Answer: D



18. Write the cellular components of blood.



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19. In earthworm, setae are absent in the segments.

- A. First and last
- B. Clitellum only
- C. First, last and clitellum
- D. Peristomium and Clitellum

Answer: C



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20. Intestine of earthworm contain a special organ which help in absorption. Identify the organ.



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21. Name the structures which help in locomotion in Earthworm.



22. In cockroach the fertilized eggs are encased in capsule called



23. Regarding the blood vascular system of frog, some statements are given below. Check whether these are True or False and make corrections if necessary. a) Open type. b) Sinus

venosus join the right atrium. c) RBC is nonnucleated. d) Circulation is achieved by the pumping action of the heart.



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24. You are given two cockroaches and the teacher asked to display the mouth parts of male cockroach. How will you identify the male cockroach?



25. You are given two cockroaches and the teacher asked to display the mouth parts of male cockroach. Name the mouth parts of cockroach.



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26. Give one word for the following. Tissue attach one bone to another.



27. Give one word for the following. The structures protect and support neurons in neural system.



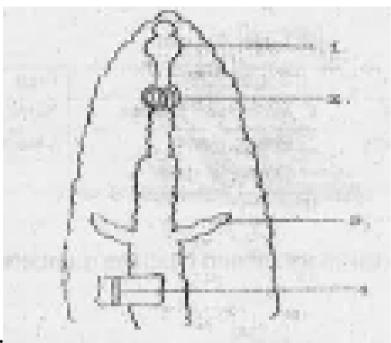
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28. Match the following.

A	В
Cuboidal epithelium	Fallopian tube
Squamous epithelium	Ducts of glands
Columnar epithelium	alveoli
Citiated epithelium	intestine



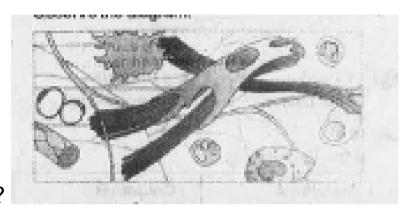
29. Copy the diagram and label the numbered



parts.



30. Observe the diagram. Name the above connective tissue. Where they found in our



body?



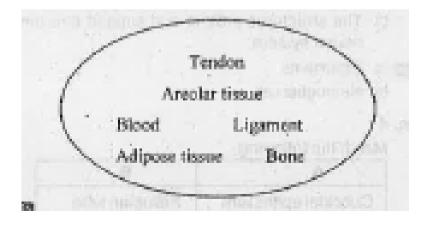
31. Observe the diagram. Name any two principle cell found in it.





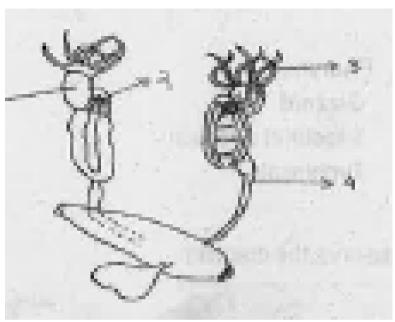
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32. Observe the pool of connective tissues carefully. Classify them under three headings.



33. Anatomical structures of 3 animals are given below. Identify the 3 animals and arrange the structures Into 3 separate groups. (Typhlosole, Malpighian tubules, Blood glands, Cloaca, Phallic gland, Kidney, Collateral Gland).

34. Copy the diagram and label the numbered



parts.



the following. **35.** Match

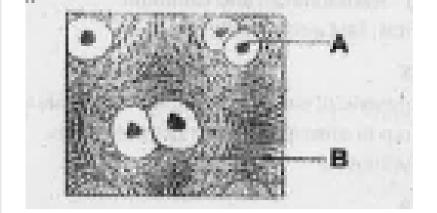
Column A	Column B
1) Haemocoelom	1) Frog
2) Typhlosole	2) Ascaris
3) Cloaca	3) Earthworm
4) Pseudocoelom	4) Cockroach



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36. Name the labeled parts a, b in the diagram

given below





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37. Circulating fluid of cockroach is colourless.

Name the circulating fluid.



38. Circulating fluid of cockroach is colourless.

Name the cell concerned in it.



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39. Give one word for the following. Tissue specialised to store fats.



40. Give one word for the following. Tissue contains fibroblasts, macrophages and mast cells



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41. Give one word for the following. Tissue attach skeletal muscles to bones.



42. You are given permanent slides of a bone and cartilage. How will you identify them using a microscope.



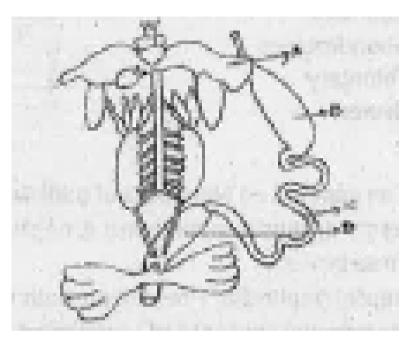
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43. Frogs maintain ecological balance. As a biological student do you agree with this statement. Why?



44. Observe the diagram given below and label

the parts A, B, C, D.





45. While viewing the fallopian tube through CT scan we can find large number of cilia. Mention the function of cilia.



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46. While viewing the fallopian tube through CT scan we can find large number of cilia. Mention the function of cilia.



47. An earth worm respires through skin and excretes through nephridia' Rewrite the above sentence beginning with 'A cockroach...... making appropriate changes



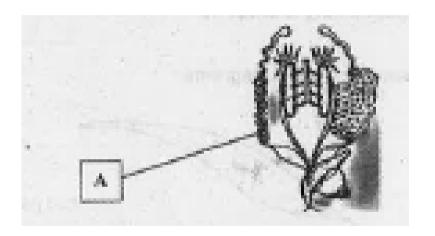
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48. Match the following.

	ediad result for all more
1) Hypopharynx	Food grinding
2) Nephridium	Food absorption
3) Gizzard	Bone cell
4) Typhlosole	Phallomere
5) Osteocyte	Tongue
6) Genitalia	Earthworm
	Frog

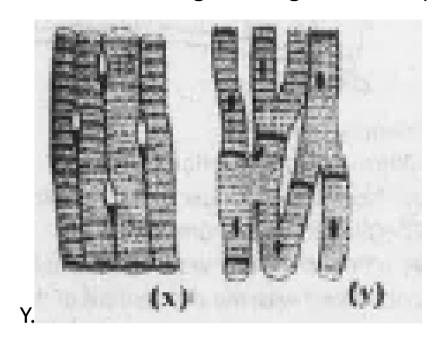


49. Identify the diagram and label the part marked A.





50. Observe the given diagram. Identify X and

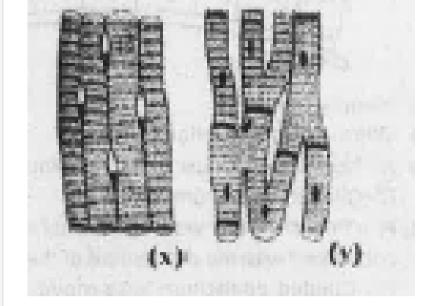




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51. Observe the given diagram. Write any two

characters of X and



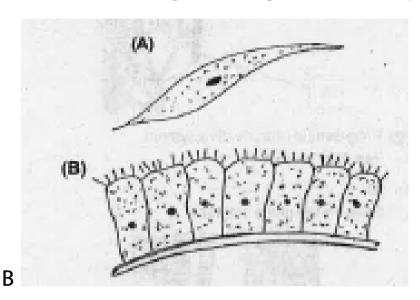


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52. There are some physiological similarities between typhlosole and villi. Substantiate your answer.

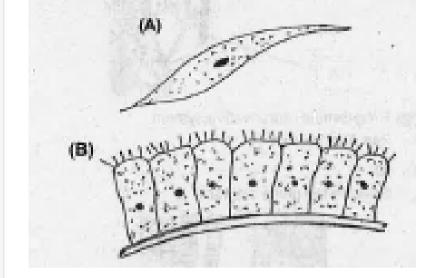


53. Observe the given diagrams. Identify A and





54. Observe the given diagrams. Write any one function of each.





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55. Write the significance of : Blood



56. Neuroglia make up more than one half the volume of neural tissue in our body'. Write the function of neuroglial cells



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57. Classify the given terms into three columns and give appropriate headings. Striated, heart muscle, intercalated disc, biceps, visceral organs, no striation.



58. Where do you find the following structure in human body: Chondrocytes



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59. Where do you find the following structure in human body: Axon



60. Where do you find the following structure in human body: Osteocytes



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61. Where do you find the following structure in human body: Plasma



62. Write the suitable world for the 4th place.

Muscle to bone-Tendon, Bone to Bone -



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63. Write the suitable world for the 4th place.

Bone - osteocytes , Cartilage -



64. Write the suitable world for the 4th place.

Cardiac Muscle - Involuntary, Striated Muscle -

•••••



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65. Write the suitable world for the 4th place.

Contractile cell - Muscle, Excitable cell -



66. Give an account on Nephridia of



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67. You are given an earthworm for dissection, how will you identify its anterior, posterior, dorsal and ventral sides



68. Blood cell of earthworm lack haemoglobin.

But blood of earthworm is red in colour. How do you account for it?



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69. Match the related items from B and C with

Column A.

A	В	C
Earthworm	Rana	Americana
Cockroach	Pheretima	Tigrina
Frog	Periplaneta	Prostomium



70. Copy and complete the animals on the table and the excretory organs

Animals	Excretory organs
Earthworm	
	Malpighian tubules
Frog	



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71. Identify the animals from the hints given below. Invertebrate, Burrowing in moist soil, Nephridia, Genital pore.

72. Identify the animals from the hints given below. Chordata, Amphibian, Kidney, Cloaca



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73. Identify the animals from the hints given below. Invertebrate, Insecta, Malpighian tubules, gonapophysis,



74. Identify the statements as True or False:

First segment of earthworm is Prostomium.



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75. Identify the statements as True or False:

Peristomium contain mouth.



76. Identify the statements as True or False: Clitellum is on segments 14-16.



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77. Identify the statements as True or False:

Earthworm has only a single female genital aperture



78. Earthworm feeds on humus, which contain large amount of humic acid. How does the earthworm neutralises the humic acid?



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79. Earthworm feeds on humus, which contain large amount of humic acid. How does the earthworm neutralises the humic acid?



80. There are some physiological similarities between typhlosole and villi. Substantiate your answer.



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81. Mention the function of the following:

- a) Blood glands of 'Pheretima'
- b) Hepatic caeca of 'Periplaneta americana'.



82. Earthworm is a hermaphrodite animal.

Where are its sex organs situated?



83. Earthworms are known as 'Friends of farmers'. Give reason.



84. Write the missing word in 4th place :

Dorsally - Tergites, Ventrally -

85. Find the relationship between given words and suggest the suitable word for the fourth place.

a) Annelida : Nephridia : :

Arthropoda:

b) Osteichthyes: Cycloid scales::

Chondrichthyes:



86. You are given two cockroaches and the teacher asked to display the mouth parts of male cockroach. How will you identify the male cockroach?



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87. While dissecting a cockroach to display its digestive system, a student observed certain thick white tubules. Teacher explained it as part of respiratory system. Name the tubules.

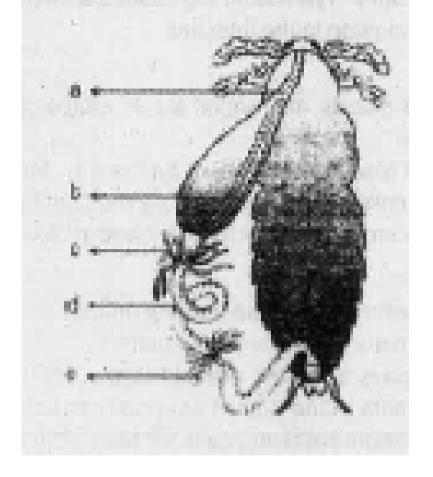


88. While dissecting a cockroach to display its digestive system, a student observed certain thick white tubules. Teacher explained it as part of respiratory system. Name the tubules.



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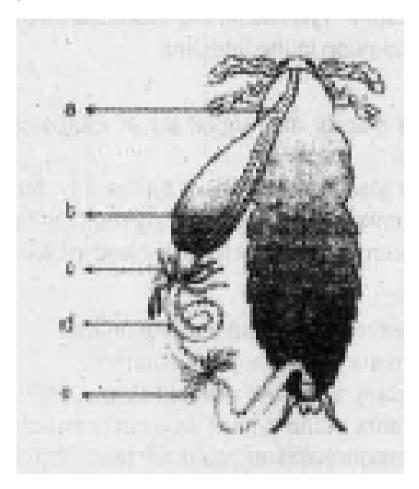
89. Identify the diagram given below. Identify parts from a to e.





90. Identify the diagram given below. Identify

parts from a to e.





91. Circulating fluid of cockroach is colourless.

Name the circulating fluid.



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92. Cockroach is uricotelic animal. Give reason.



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93. Name the four structure helps in excretion in cockroaches.



94. If the head of cockroach is cut off, it will still alive for as long as one week. Give reason



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95. Name the sensory organs of cockroaches



96. Compound eyes are more effective than vertebrate eye. Give reason



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97. Frog show sexual dimorphism. Write the morphological difference present only in male frog



98. Prepare a flow chart showing the flow of food in the alimentary canal of frog. Compare it with alimentary canal of cockroach.



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99. Cloaca is a common opening of 3 tubes or tracts. Name the tracts which opens to cloaca.



100. Cloaca is a common opening of 3 tubes or tracts. Name the tracts which opens to cloaca.



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101. Name the portal systems found in frog Between liver and intestine,



102. Name the portal systems found in frog Between kidney and lower parts of the body



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103. Frog is ureotelic animal How?



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104. Name the different parts of the excretory system of frog



105. Answer in one word : Covering of eyes in frog



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106. Answer in one word : Number of cranial nerves in frog



107. Answer in one word : Membranous covering of Heart of frog



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108. Answer in one word: Brain of frog is enclosed in a bony structure named..........



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109. Answer in one word : Larval stage of frog





110. Frogs are beneficial for mankind. Justify.

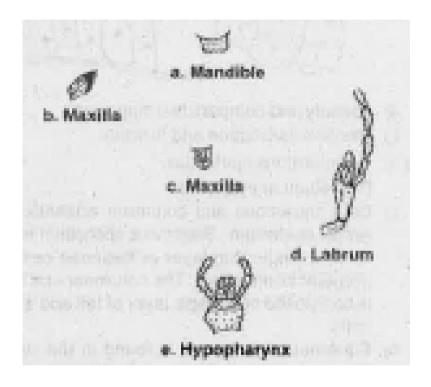


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111. Compare the circulatory system and blood of frog with that of an earthworm.



112. The mounting of mouth parts of cockroach are given below. If there is any error, correct it.





113. Answer in one word or one line: Give the common name of Periplaneta Americana



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114. Answer in one word or one line: How many spermathecae are found in earthworm?



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115. Answer in one word or one line: What is the position of a ovaries in cockroach?

116. Answer in one word or one line: How many segments are present in the abdomen of cockroach.



117. Answer in one word or one line: Where do you find Malpighian tubules?



118. Answer in one word or one line : Development through nymphal stage



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119. "All glands In our body do not have ducts of their own". Do you agree with this statement. Justify your answer using example.

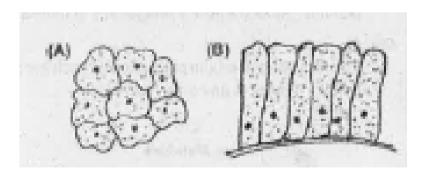


120. Name three types of cell Junctions in the epithellum.



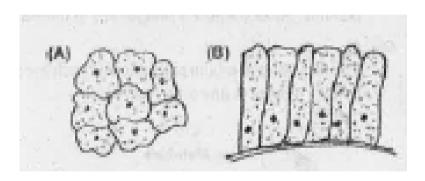
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121. Observe the following diagram carefully. Identify and compare two diagrams with its functions.





122. Observe the following diagram carefully. Identify and compare two diagrams with its functions.





123. Compare the excretory System in Cockroach and Frog



124. Mention the mode of respiration In a frog while it is in water



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125. Mention the mode of respiration In a frog while it is On land



126. Mention the mode of respiration In a frog while it is When under aestivation or hibemation.



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127. Arrange the columns A, B, and C in the table below and match them properly.

A	В	C
Squamous epithelium	Interculated disc	Present between vertebrae
Cartilage	Dendrites	Helps in gas diffusion in lungs
Cardiac muscle	Chondrocytes	Impulse transmission
Neuron	Volkman's canal	Antibody formation
	Flattened cells	Helps in heart beat

128. Give reasons: Simple epithelium functions as lining for the body cavities, ducts, tubes etc. where as compound epithelium is protective in function



129. Give reasons: Cockroach does not possess respiratory pigment

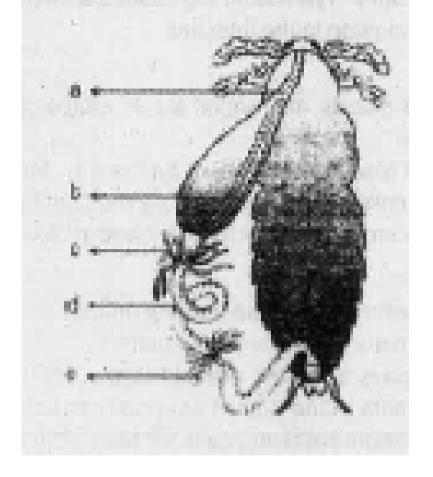


130. Give reasons: Frog is ureotelic where as tadpole is ammonotelic.



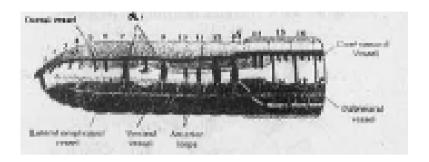
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131. Identify the diagram given below. Identify parts from a to e.





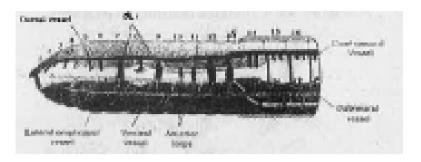
132. Analyse the circulatory system of the animal. Label the part marked as a...





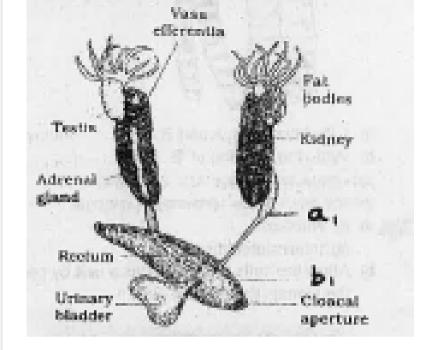
133. Analyse the circulatory system of the animal. Compare it with the circulatory system of cock roach. Which one according to you is

more advanced?





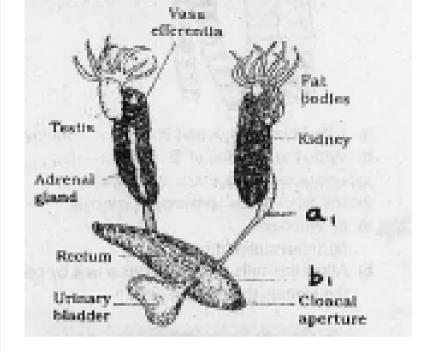
134. Observe the diagram glven below: Identify and write the peculiarity of the system.





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135. Observe the diagram glven below: Label the parts marked as a, and b.





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136. Arrange the following words into two groups and give and appropriate heading to each group. Testes, oviduct, cloaca, Bidder's

canal, ovaries, urinogenital duct, vasa efferentia, cloaca.



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137. Observe the following figure. No need to redraw the diagram. Label the parts, A and B. Write the function of B.



138. Identify the following tissues. Tissue that conducts impulses,



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139. Give one word for the following. Tissue specialised to store fats.



140. Give one word for the following. Tissue attach skeletal muscles to bones.



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141. Give one word for the following. Tissue attach one bone to another.



142. Name three types of cell Junctions in the epithellum.



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143. Name three types of cell Junctions in the epithellum.



144. Facts related to two types of tissues are given be low. Arrange them in two columns by giving suitable headings. Mention the location of each tissue in the human body. A sheath of tough connective tissue, Striations absent, Bundled together in a parallel fashion, Fusiform shape, Involuntary in function, Striated appearance.



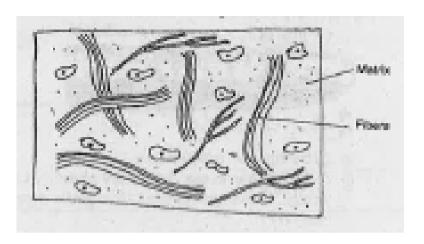
145. The structural and functional abilities of earth worms are helpful for it to become friends of farmers', Evalu- ate this statement and substantiate your answer.



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146. Observe the schematic diagram of a tissue. The fibers in this tissue help the tissue

to perfom its function. Substantiate.

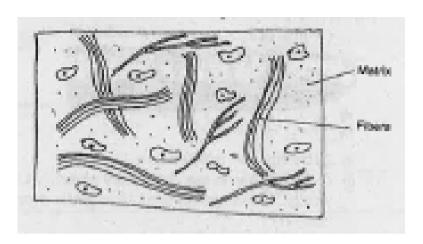




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147. Observe the schematic diagram of a tissue. The fibers in this tissue help the tissue

to perfom its function. Substantiate.





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148. Arrange the following organs in the antero-posterior order of the earthworm body: Intestinal caeca, gizzard, blood glands, testes, ovary, clitellum



149. Vermicomposting is an advanced strategy in agriculture. What capabilities of the earthworm are utilized in this strategy?



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150. Features of a particular tissue visible through a microscopic observation is presented here: Cells are closely arranged. Intercellular matrix absent. Cells are

supported by basement membrane. Identify the animal tissue.



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151. Features of a particular tissue visible through a mi croscopic observation is presented here: Cells are closely arranged. Intercellular matrix absent. Cells are supported by basement membrane. Classify this tissue based on the number of cell layers.



152. Features of a particular tissue visible through a mi croscopic observation is presented here: Cells are closely arranged.

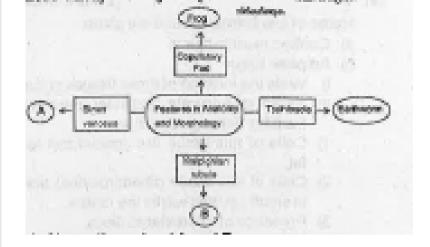
Intercellular matrix absent. Cells are supported by basement membrane. Mention their functions.



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153. Observe the diagrammatic representation.

Name the animal A and B.

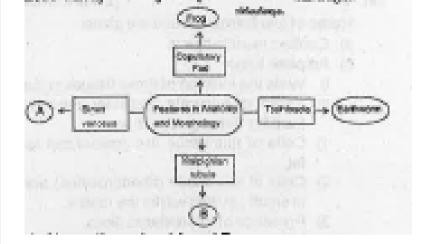




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154. Observe the diagrammatic representation.

Name the animal A and B.





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155. Where do you find the following structure in a human body? Collagen fibres



156. Where do you find the following structure in human body: Axon



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157. Where do you find the following structure in a human body? Squamous epithelium



158. Where do you find the following structure in a human body? Smooth muscles



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- **160.** Mention the function of the following:
- a) Blood glands of 'Pheretima'
- b) Hepatic caeca of 'Periplaneta americana'.



- **161.** Mention the function of the following:
- a) Blood glands of 'Pheretima'
- b) Hepatic caeca of 'Periplaneta americana'.



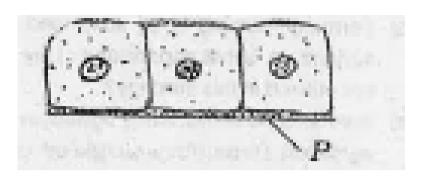
162. If the head of cockroach is cut off, it will still alive for as long as one week. Give reason



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163. The diagram given below is a simple epithelium. Name the part marked as "P" in the figure. Write one function of simple

epithelium.

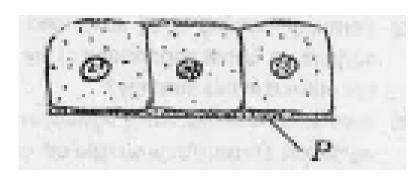




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164. The diagram given below is a simple epithelium. Name the part marked as "P" in the figure. Write one function of simple

epithelium.





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165. The male and female cockroaches can be identified by the difference in their morphological features. Name this phenomenon



166. The male and female cockroaches can be identified by the difference in their morphological features. Name this phenomenon



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167. Select the odd one out in the following series: Areolar tissue, Blood, Neuron, tendon



168. Select the odd one out in the following series: Hypopharynx: Malpighian tubules, Maxillae, Labrum



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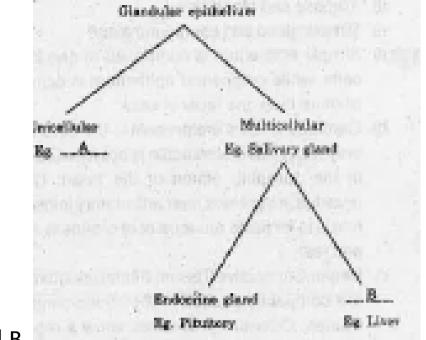
169. In a laboratory session your Biology teacher exhibited blood smears (slides) of cockroach and human be ings under microscope. How will you distinguish them

based on the nature of plasma and blood cells?



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170. Observe the following chart and answer the given questions: Fill in the missing words

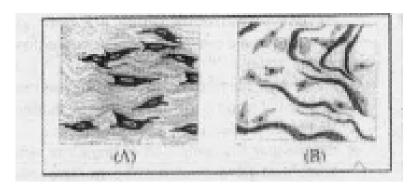


A and B.



171. Identify the given diagrams of connective tissues A and B. Write the location of tissue B

in the body.

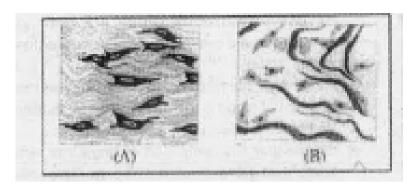




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172. Identify the given diagrams of connective tissues A and B. Write the location of tissue B

in the body.





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173. Prepare two correctly matched pairs form the given terms. Ommatidia Hepatic caecae Genital pouch Sense organ Excretory organ Digestive gland Upper lip



174. In cockroach spiracles are present in......

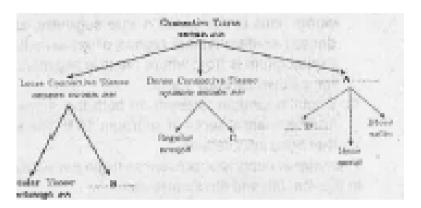
- A. Alimentary canal
- B. Tracheal System
- C. Malpighian tubules
- D. Reproductive system

Answer: B



175. Complete the given branching diagram

based on connective tissue.





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176. Answer in one word or one line: Give the common name of Periplaneta Americana



177. Answer in one word or one line: How many spermathecae are found in earthworm?



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178. Answer in one word or one line: What is the position of a ovaries in cockroach?



179. Answer in one word or one line: How many segments are present in the abdomen of cockroach.



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180. Answer in one word or one line: Where do you find Malpighian tubules?



181. Give an account on Nephridia of earthworm



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182. Give an account on Nephridia of earthworm



183. Distinguish between the following: Prostornium and peristomium



184. Distinguish between the following: Septal nephridium and pharyngeal nephridium



185. Write the cellular components of blood.



186. Where do you find the following structure in human body: Chondrocytes



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187. Give reasons: Simple epithelium functions as lining for the body cavities, ducts, tubes etc. where as compound epithelium is protective in function



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188. Distinguish between Cardiac muscle and striated muscle



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189. Distinguish between Dense regular and dense irregular connective tissues



190. Distinguish between Adipose and blood tissue



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191. Distinguish between Simple gland and compound gland



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192. Select the odd one out in the following series: Areolar tissue, Blood, Neuron, tendon



193. Mark the odd one in each series: RBC, WBC, platelets, cartilage



194. Mark the odd one in each series: Exocrine, endocrine, salivary gland, ligament



195. Mark the odd one in each series: Maxilla, mandible, labrum, antennae



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196. Mark the odd one in each series:

Protonema, mesothorax, metathorax, coxa



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197. Carotene pigment is found in the cells of

- A. dermis
- B. epidermis
- C. adipose cell
- D. Both (b) and (c)

Answer: D



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198. The lining of intestine and kidneys in human is

- A. keratinised
- B. brush bordered
- C. ciliated
- D. None of these

Answer: B



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199. The type of cell junction, which facilitates cell to cell communication is

- A. tight junction
- B. adhering junction
- C. gap junction
- D. desmosomes

Answer: C



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200. Keratinised dead layer of skin is made up of

- A. stratified squamous
- B. simple cuboidal
- C. simple columnar
- D. stratified columnar

Answer: A



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201. Endothelium of blood vessels is made up of

- A. simple cuboidal epithelium
- B. simple squamous epithelium
- C. simple columnar epithelium
- D. simple non-ciliated columnar

Answer: B



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202. In which one of the following preparations are you likely to come across cell junctions most frequently?

- A. Ciliated epithelium
- B. Thrombocyte
- C. Tendon
- D. Hyaline cartilage

Answer: A



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203. Bowman's glands are located in the

A. proximal end of uriniferous tubules

- B. anterior pituitary
- C. female reproductive system of cockroach
- D. olfactory epithelium of our nose

Answer: D



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204. Compound squamous epithellum is found in

A. stomach

- B. intestine
- C. trachea
- D. pharynx

Answer: D



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205. Find out the wrongly matched pair.

A. Squamous epithelium-Skin of frog

- B. Columnar epithelium -Peritoneum of body cavity
- C. Ciliated epithelium-Bronchioles
- D. Stratified squamous-Oesophagus epithelium

Answer: B



206. The type of tissue lining the nasal passage, bronchioles and fallopian tubes is

- A. columnar ciliated epithelium
- B. cuboidal epithelium
- C. neurosensory epithelium
- D. germinal epithelium

Answer: A



207. The nasal chamber of rabbit has three thin twisted bony plates called conchae. They are lined by

- A. striated cuboidal epithelium
- B. simple cuboidal epithelium
- C. simple squamous epithelium
- D. simple ciliated columnar epithelium

Answer: D



208. The cavities of alveoli of lungs are lined by

- A. cuboidal epithelium
- B. columnar epithelium
- C. stratified cuboidal epithelium
- D. squamous epithelium

Answer: D



209. The type of tissue lining the nasal passage, bronchioles and fallopian tubes is

- A. squamous epithelium
- B. columnar epithelium
- C. ciliated epithelium
- D. cubical epithelium

Answer: C



210. Agranulocytes are

- A. lymphocytes and monocytes
- B. eosinophils and basophils
- C. lymphocytes and eosinophils
- D. basophils and monocytes

Answer: A



211. _____ acts as a shock absorber to cushion when tibia and femur came together.

- A. Ligament
- B. Cartilage
- C. Tendon
- D. Disc

Answer: B



212. Erythropoiesis starts in

- A. kidney
- B. liver
- C. spleen
- D. red bone marrow

Answer: B



213. Largest single mass of lymphatic tissue in the body is

- A. lung
- B. spleen
- C. liver
- D. kidney

Answer: B



214. Hypochromic microcytic anaemia and leukopenia are caused by the deficiency of respectively.

- A. pyridoxine and riboflavin
- B. pyridoxine and folacin
- C. biotin and folacin
- D. biotin and cyanocobalamin

Answer: B

