

GPLUS EDUCATION

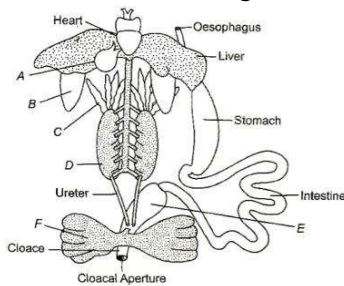
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BIOLOGY

STRUCTURAL ORGANISATION IN ANIMALS

Single Correct Answer Type

- Lymphoid tissue is found in
a) Thymus b) Tonsils c) Lymph nodes d) All of these
- Earthworm lives in the burrows made by boring and swallowing the soil to
a) Uptake food b) Get moisture c) Procreation d) Avoid opponents
- Which of the following cells are round and biconcave in shape?
a) White blood cells b) Red blood cells
c) Columnar epithelial cells d) Nerve cells
- Given below the diagram of internal organs of frog and identify *A* to *F*



- a) A-Gall bladder, B-Lungs, C-Testis, D-Kidney, E-Urethra, F-Urinary bladder
b) A-Gall bladder, B-Lungs, C-Fat bodies, D-Kidney, E-Rectum, F-Urinary bladder
c) A-Gall bladder, B-Lungs, C-Ovary, D-Kidney, E-Ileum, F-Urinary bladder
d) A-Gall bladder, B-Lungs, C-Fat bodies, D-Kidney, E-Colon, F-Urinary bladder
- The clitellum divides the body of earthworm into regions
a) 3 b) 2 c) 4 d) 5
- Identify *A*, *B* and *C* in the given diagram of adipose tissue

a) A-Cytoplasm, B-Nucleus, C-Cell wall
b) A-Fat storage area, B-Mast cell, C-Plasma membrane
c) A-Cell fluid, B-Collagen fibres, C-Plasmalemma
d) A-Fat storage area, B-Nucleus, C-Plasma membrane
- How many litres of blood is present in normal human body?
a) 6.8 L b) 6.0 L c) 5.9 L d) 7.2 L
- Lining of body cavities, ducts and tube are made up of
a) Compound epithelium b) Simple epithelium
c) Cuboidal epithelium d) Keratinised epithelium
- Which of the following metalloprotein is found in the blood of earthworm?
a) Haemoglobin b) Hemerytherin c) Hemocyanin d) Myoglobin
- Histamine, serotonin and heparin are secreted by
a) Lymphocytes b) Monocytes c) Neutrophils d) Basophils
- 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 epithelium - Oesophagus
12. The body wall of the earthworm is covered by which of the following layers (externally-internally)?
 a) Epidermis, cuticle, coelomic epithelium, longitudinal muscle, circular muscles
 b) Cuticle, epidermis, circular muscles, coelomic epithelium, longitudinal muscle
 c) Non-cellular cuticle, epidermis, circular muscles, longitudinal muscles, coelomic epithelium
 d) Coelomic epithelium, epidermis, cuticle, circular muscles, longitudinal muscles
13. The number of pairs of cranial nerves arising from the brain of frog is
 a) 10 b) 9 c) 8 d) 7
14. The ova of the earthworms are fertilised by the sperm within the
 a) Cocoon b) Seminal vesicles c) Soil d) None of the above
15. Which of the following tissues provides a covering layer for some of the body parts?
 a) Connective tissues b) Muscular tissues
 c) Epithelial tissues d) Neural tissues
16. Consider the following statements about the connective tissue
 I. Their special function is linking and supporting the other organs tissue of the body
 II. It is the most abundant type of animal tissue
 III. Blood is a specialised connective tissue which contains collagen
 IV. The cells of connective tissue secretes mucous
 Which of the statement given above are incorrect?
 a) I and II b) II and III c) III and IV d) I, II, III and IV
17. Which of the following type of connective tissue is present at the tip of human nose?
 a) Cartilage b) Bone c) Adipose tissue d) None of these
18. The tissue which forms the glands in humans is
 a) Muscular tissue b) Nervous tissue c) Epithelium tissue d) Connective tissue
19. How many species of *Pheretima* are found all over the world?
 a) 200 b) 300 c) 400 d) 500
20. In which of the following segments of earthworm, septal nephridia is present?
 a) 15-last b) 8-15 c) 18-last d) 15-17
21. Which of the following part of the alimentary canal of cockroaches is used for storing food?
 a) Crop b) Gastric caecae c) Gizzard d) Oesophagus
22. In earthworm, pharyngeal nephridia are present as three paired tufts in the segments
 a) 3rd, 4th and 5th b) 4th, 5th and 6th c) 5th, 6th and 7th d) 6th, 7th and 8th
23. type of junction is found in the epithelium and other tissues. Fill up the blank by using a suitable word
 a) Two b) Three c) One d) Four
24. Which of the following is a sense organ pair in cockroach?
 a) Antennae and eyes
 b) Maxillary palp and labial palps
 c) Antennae and anal cerci
 d) All of the above
25. Which one is an iron storage protein?
 a) Myosin b) Glutelin c) Ferritin d) Immunoglobulin
26. WBC_S accumulate at site of wound by
 a) Hypertension b) Arteriosclerosis c) Haemopoiesis d) Diapedesis
27. Cells of areolar tissues that produces or secrete fibres are called
 a) Fibroblast b) Mast cells c) Macrophage d) Adipocytes
28. Hypopharynx of the cockroach acts as
 a) Mouth b) Lips c) Tongue d) Jaws

29. The frogs have the ability to change its colour to hide them from their enemies. This protective colouration is called
- a) Hibernation b) Aestivation c) Mimicry d) Camouflage
30. Agranulocytes are
- a) Lymphocytes and monocytes b) Eosinophils and basophils
c) Lymphocytes and eosinophils d) Basophils and monocytes
31. Which of the following is not a function of epithelium?
- a) Protection b) Connection
c) Secretion or excretion d) Adsorption
32. In cockroaches, stink gland is found in
- a) 4th and 5th terga
b) 5th and 6th terga
c) 5th and 6th sterna
d) 4th and 5th sterna
33. Animal tissues are categorised into four basic types on the basis of
- a) Function and origin b) Structure and functions
c) Functions only d) Origin and structures
34. The number of vasa efferentia that arises from testes in frog's male reproductive system is
- a) 9 – 12 b) 10 – 12 c) 13 – 16 d) 16 – 19
35. The multilobed nucleus and granular WBCs are
- a) Eosinophils b) Neutrophils c) Lymphocytes d) Monocytes
36. Which of the following is not correctly matched?
- a) Cartilage – Limbs and hands in adults b) Blood – Fluid connective tissue
c) Tendons – Connects bone to bone d) Adipose tissue – Blubber of whales
37. Red cell count is carried out by
- a) Haemocytometer b) Haemoglobinometer
c) Sphygmomanometer d) Electrocardiogram
38. Which of the following are the examples of saccular glands?
- a) Oil and milk glands of humans b) Sweat gland in mammals
c) Brunner's gland in humans d) None of the above
39. Tendons helps in connecting
- a) Muscles to bones b) Bone to bone c) Bone of cartilage d) Cartilage to muscle
40. The leucocytes contain, which of the following in large quantity?
- a) Basophils b) Neutrophils c) Eosinophils d) Monocytes
41. A complete set of the mouth part of cockroach consists of
- a) Labrum and labium
b) Labium, labrum and tongue
c) Larum, mandibles, maxillae and labium
d) Labrum, maxillae and labium
42. In which of the following muscle fibres intercalated disc occurs?
- a) In non-striped muscles
b) Between cardiac muscle fibres
c) At the junction of muscle and nerve cells
d) In striped muscles
43. Which of the following part of cockroach's alimentary canal secretes digestive juices?
- a) Malpighian tubule b) Proventriculus c) Caecae d) Crop
44. Consider the following statements related to *Rana tigrina* and select the correct option stating which are true and which are false
- I. Hindlimbs are larger and muscular than forelimbs
II. The alimentary canal of frog is short

III. They respire on the land through skin only

IV. They contains two-chambered heart

I II III IV

a) T F T F b) F F T T c) F T T F d) T T F F

45. During inflammation, which of the following is secreted by connective tissue?

a) Heparin b) Histamine c) Serotonin d) Glucagon

46. Given below the functions of different parts of the alimentary canal of cockroach. Correlate these functions with their respective organs

I. Grinding of food particles

II. Secretion of digestive juices

III. Clearing of haemolymph

The correct set of organs is

a) I. Malpighian tubule

II. Proventriculus

III. Hepatic caecae

b) I. Proventriculus

II. Gastric caecae

III. Malpighian tubule

c) I. Gastric caecae

II. Gizzard

III. Malpighian tubule

d) I. Gizzard

II. Crop

III. Malpighian tubule

47. The compound eyes of cockroaches consists of about

a) 200 hexagonal ommatidia

b) 2000 hexagonal ommatidia

c) 20 hexagonal ommatidia

d) 20,000 hexagonal ommatidia

48. In frog, for the digestion of food, wall of the stomach secretes

a) Pepsins and renin

b) Amylase and tryptophanase

c) HCl and gastric juices

d) HCl and pepsin

49. The major constituent of connective tissue is

a) Vitamin

b) Carbohydrate

c) Lipid

d) Collagen

50. The body of earthworm is divided into

a) 100-120 metamers

b) 150-200 metamers

c) 250-300 metamers

d) 300-350 metamers

51. Which of the following gland is present in man but not in frog?

a) Thyroid gland

b) Salivary gland

c) Pancreas

d) Liver

52. 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 epithelium

53. Ciliated epithelium is present in

a) Trachea

b) Ureter

c) intestine

d) Nasal chamber

54. In water, the skin of the frog performs the function of

a) Osmosis

b) Plasmolysis

c) Diffusion

d) Thermoregulation

55. Which type of tissue is present in human heart?

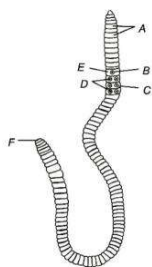
a) Epithelial tissue

b) Muscular tissue and neural tissue

c) Connective tissue

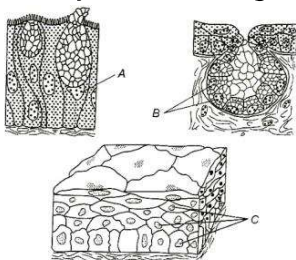
d) All of the above

56. Given below the diagram of the ventral view of earthworm's body. Identify A to F and choose the correct combination of options



- a) A-Setae, B-Female genital aperture, C-Male genital aperture, D-Genital papillae, E-Clitellum, F-Anus
- b) A- Anus, B- Setae, C-Male genital aperture, D- Female genital aperture, E-Genital papillae, F- Clitellum
- c) A-Setae, B- Male genital aperture, C- Female genital aperture, D-Genital papillae, E-Clitellum, F-Anus
- d) A-Nephridiopores, B- Setae, C-Nuclei, D-Metamers, E-Prostomium, F-Anus

57. Identify A, B and C in given figures and choose the correct combination of options



- a) A-Unicellular gland, B-Multicellular gland, C-Multilayered cells
- b) A-Multicellular gland, B-Unicellular gland, C-Squamous epithelium
- c) A-Goblet gland, B-Multicellular gland, C-Columnar epithelium
- d) A-Flattened cell, B-Multilayered cells, C-Transitional epithelium

58. Consider the following statement about frog's digestive system

- I. Food is captured by the bilobed tongue
- II. Partially digested food is called chyme. It is passed from the stomach to the first part of intestine
- III. Bile digests carbohydrates and proteins
- IV. Inner wall of the intestine contains cilia

Which of the above given statement are incorrect?

- a) I and II
- b) II and III
- c) III and IV
- d) I and IV

59. The cell junctions called tight, adhering and gap junctions are found in

- a) Muscular tissue
- b) Connective tissue
- c) Epithelial tissue
- d) Neural tissue

60. The principal role of setae in earthworm is

- a) Respiration
- b) Excretion
- c) Locomotion
- d) Assimilation

61. In addition to the Malpighian tubules, excretion of the waste products in cockroach occurs by

- a) Fat bodies
- b) Nephrocytes
- c) Ureose glands
- d) All of these

62. Which of the following organ is not present on earthworm?

- a) Peristomium
- b) Copulatory papillae
- c) Tail
- d) Setae

63. Setae helps in the locomotion of earthworm but is not present uniformly in all the segments of the earthworm segments. Select among the following that represent setae

- a) 1st segment
- b) Last segment
- c) Clitellar segment
- d) All except those metioned in options (a), (b) and (c)

64. Earthworm reacts to the chemical stimuli due to the presence of

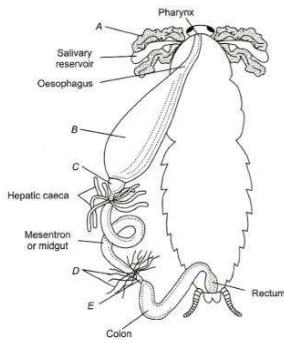
- a) Mechanical receptor
- b) Photoreceptor
- c) Eyes
- d) Chemoreceptors

65. Find out the pair in reference to the earthworm, which is not correctly matched

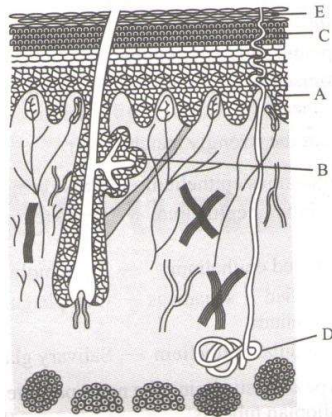
- a) Clitellum – Secretes cocoon
- b) Blood plasma – Contains haemoglobin

- c) Setae – Defence against predators
d) Typhosole – Absorption
66. Which of the following structures is *Pheretima* is correctly matched with its function
a) Clitellum – Secretes cocoon
b) Gizzard – Absorbs digested food
c) Setae – Defence against predators
d) Typhosole – Storage of extra nutrients
67. Fertilisation and development in earthworms occurs with in the
a) Spermathecae
b) Cocoon
c) Prostate gland
d) Seminal vesicles
68. Cardiac muscles are
a) Striated and voluntary
b) Striated and involuntary
c) Smooth and voluntary
d) Smooth and involuntary
69. Keratinized dead layer of skin is made up of
a) Stratified squamous epithelium
b) Simple cuboidal epithelium
c) Simple columnar epithelium
d) Stratified columnar epithelium
70. Rh factor is present in
a) All vertebrates
b) All mammals
c) All reptiles
d) Man and rhesus monkey only
71. Which of the following statement is/are incorrect in refer one to earthworms?
I. They are soft and naked and hence, cannot survive in the dry earth
II. They respire through the nasal openings
III. They decaying organic matter of the soil forms their chief food
IV. Rain makes the earth soft for burrowing
a) I and IV
b) II and III
c) II and IV
d) II and III
72. Consider the following statements about respiratory system of frog
I. Skin acts as a respiratory organ in water as well as on land
II. Dissolved oxygen is exchanged through the skin by the process of diffusion in water
III. Lungs are paired and present in thorax
IV. Gaseous exchange takes place through the skin during hibernation and aestivation
Which of the statements given above is are incorrect?
a) Only I
b) I and II
c) I, II and III
d) II and IV
73. Which of the following connective tissue does not contain collagen?
a) Cartilage
b) Bone
c) Blood
d) Adipose
74. In male frog, ureters act as
a) Urinogenital ducts
b) Cloaca
c) Urinary bladder
d) Lymphatic system
75. The development of *Periplanata americana* is
a) Holometabolous
b) Paurometabolous
c) Ametabolous
d) Hemimetabolous
76. Consider the following statements in accordance to the excretory system of the earthworm
I. Nephridia is segmentally arranged coiled tubule
II. Nephridia regulates the volume and composition of the body fluids
III. There are three type of nephridia found in the earthworm
IV. Pharyngeal nephridia is present as three paired tufts in the 4th, 5th and 6th segment
Which of the above statement is/are correct?
a) Only I
b) I and IV
c) I, II and III
d) I, II, III and IV
77. Septal nephridia of earthworm opens into the
a) Stomach
b) Lining of body wall
c) Intestine
d) Coelomic chamber
78. The type of tissue lining present on the ducts of salivary gland and pancreas is
a) Columnar epithelium
b) Cuboidal epithelium
c) Compound epithelium
d) Glandular epithelium
79. In which of the following body segments of cockroach wings are not present?

- a) Mesothorax b) Metathorax c) Prothorax d) Prethorax
80. Cutaneous respiration occurs in
a) Earthworm b) Frog c) Cockroach d) Rabbit
81. Numerous minute pores opens on the surface of the body of earthworm are called
a) Setae b) Nephridiopores c) Spermatospore d) None of the above
82. The in frog acts as a chemical messenger which controls and coordinate the functioning of various organs of the body
a) Blood b) Hormones c) Plasma d) Haemoglobin
83. Blood is a kind of
a) Areolar tissue b) Connective tissue
c) Fluid connective tissue d) Reticular connective tissue
84. Which of the following cell is rounded and biconcave in shape?
a) WBCs b) RBCs c) Epithelial cells d) Nerve cells
85. During the process of blood coagulation, vitamin-K helps in the
a) Formation of thromboplastin b) Formation of prothrombin
c) Conversion of prothrombin to thrombin d) Conversion of fibrinogen to fibrin
86. During blood clotting, which of the following is used?
a) Co b) Ca⁺ c) Na⁺ d) Cl⁻
87. pair of spermathecae are located insegments of earthworm
a) Two, 7th-8th b) Three, 9th-11th c) Four, 6th-9th d) One, 3th-5th
88. Adipose tissue is a type of
a) Loose connective tissue b) Dense connective tissue
c) Specialised connective tissue d) None of the above
89. Blood platelets are found only in the blood of
a) Birds b) Reptiles c) Mammals d) Amphibians
90. Fibroblasts, macrophages and mast cells are present in
a) Cartilage tissue b) Adipose tissue
c) Areolar tissue d) Glandular epithelium
91. During respiration in frog, the hyoid and floor of the buccal cavity are raised with the help of
a) Sternohyal muscles b) Petrohyal muscles c) Ligaments d) Intercoastal muscles
92. Bones are made up of
a) Magnesium phosphate b) Sodium chloride
c) Calcium phosphate d) Phosphorus
93. In frog, microvilli is present in
a) Intestine b) Stomach c) Oesophagus d) Buccal cavity
94. Vagina, oesophagus and urethra contain which type of tissue?
a) Stratified squamous epithelium b) Simple squamous epithelium
c) Ciliated epithelium d) Columnar epithelium
95. Collagen is a
a) Phosphoprotein b) Globulin c) Derived protein d) Scleroprotein
96. Goblet cells of alimentary canal are a type of
a) Intercellular gland b) Multicellular gland c) Unicellular gland d) None of these
97. Given below the figure of alimentary canal of cockroach. Identify A to E and choose the correct combination of A to E/A to F



- a) A-Salivary gland, B-Gizzard, C-Crop, D-Villi, E-Caecum
 b) A-Salivary gland, C-Crop, B-Gizzard, D-Malpighian tubules, E-Ileum
 c) A-Salivary gland, B-Gizzard, D-Malpighian tubule, D-Cilia, E-Ileum
 d) A-Salivary gland, C-Crop, D-Malpighian tubule, B-Gizzard, E-Ileum
98. Urinary bladder is..... in frogs
 a) Mutilobed b) Absent c) Unilobed d) Bilobed
99. The number of teeth in the lower jaw of frog is
 a) Two b) Four c) Three d) None of these
100. Pseudostratified epithelium is found in
 a) Pharynx b) Trachea c) Testis d) Epidermis
101. The largest tergal part in cockroach is
 a) Mesonotum b) Metanotum c) Pronotum d) Plurae
102. Which of the following epithelium is composed of single layer of tall and slender cells?
 a) Cuboidal epithelium
 b) Columnar epithelium
 c) Ciliated epithelium
 d) Glandular epithelium
103. In the diagram given below, parts labeled as 'A', 'B', 'C', 'D' and 'E' respectively represent

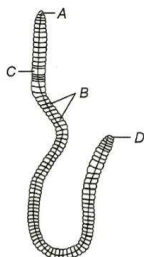


- a) A Stratum granulosum,
 B Sweat gland,
 C Stratum germinativum,
 D Sebaceous gland,
 E Stratum corneum
- b) A Stratum granulosum,
 B Sebaceous gland,
 C Stratum germinativum,
 D Sweat gland,
 E Stratum corneum
- c) A Stratum germinativum,
 B Sweat gland,
 C Stratum lucidium,
 D Sebaceous gland,
 E Stratum corneum
- d) A Stratum germinativum,
 B Sebaceous gland,
 C Stratum lucidium,
 D Sweat gland,
 E Stratum corneum,
104. Universal blood recipient is

- a) Blood group-O b) Blood group-AB c) Blood group -A d) Blood group-B
105. Which of the following statement is/are correct in relation with epithelial tissue?
 I. It helps in protection and storage
 II. It helps in excretion and reproduction
 III. It helps in absorption and secretion
 IV. It helps in locomotion
 a) Only IV b) Only II c) All except IV d) All except III
106. The blubber is formed by
 a) Elastic tissue b) Reticular tissue c) Adipose tissue d) Fibrous tissue
107. With the help of the following, identify the correct sequence, that leads to the formation of blood clot
 I. Blood clot II. Injury
 III. Factor II IV. Factor III
 V. Factor IV VI. Fibrinogen
 VIII. Thrombin
 a) II→III→IV→VI→VII→I b) II→III→VII→VI→I \xrightarrow{FII} IV↑ e⁺ ←^e
 c) IV→II→III→VII→VI→I↑ e⁺ d) II→IV→III→VI→VII→I↑ e⁺
108. In frog, a solid muscular organ situated in the upper part of the body cavity is
 a) Heart b) Intestine c) Lungs d) Kidney
109. The dorsal surface of the earthworm's body is marked by
 a) Genital pores b) Mouth c) Heart d) Blood vessel
110. Erythropoiesis starts in
 a) Kidney b) Liver c) Spleen d) Red bone marrow
111. The most active phagocytic white blood cells are
 a) Neutrophils and eosinophils b) Lymphocytes and macrophages
 c) Eosinophils and lymphocytes d) Neutrophils and monocytes
112. Cingulum of the earthworm is concerned with
 a) Copulation b) Burrowing c) Cocoon formation d) Spermatogenesis
113. Tendons and ligaments are specialized types of
 a) Nervous tissue b) Muscular tissue c) Epithelial tissue d) Connective tissue
114. Which of the following has a triple helix structure?
 a) Haemoglobin b) Keratin c) Lysozyme d) Collagen
115. The first segment of earthworm's body, which contains mouth is called
 a) Prostomium b) Peristomium c) Coelom d) Protractor
116. You are required to draw blood from patient and to keep it in a test tube for analysis of blood corpuscles and plasma. You are also provided with the following four types of test tubes, which of them will you not use for the purpose?
 a) Test tube containing calcium bicarbonate b) Chilled test tube
 c) Test tube containing heparin d) Test tube containing sodium oxalate
117. In which of the following tissue preparations, signet ring appearance is obtained?
 a) Epithelial tissue b) Dense connective tissue
 c) Adipose tissue d) Reticular tissue
118. Tissue is
 a) A group of similar cells together with their associated cell intercellular substances which perform a specific function
 b) A single cell with specified functions
 c) Composed of a single layer with cube-like cells
 d) None of the above
119. The alimentary canal of frog is short because frogs are
 a) Herbivores b) Carnivores c) Omnivores d) Heterotrophs
120. Which of the following exhibits sexual dimorphism?

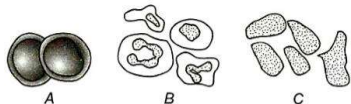
- a) Frogs b) Leech c) Earthworm d) Butterfly
121. Which of the following statements is associated with epithelium?
 a) Cells are compactly packed with little intercellular matrix
 b) Cells are loosely packed with large intercellular matrix
 c) It is highly vascularised
 d) It is a supporting tissue
122. The common Indian earthworm are
 a) *Pheretima* and *Tigrina* b) *Pheretima* and *Hirudo*
 c) *Pheretima* and *Terrestris* d) *Pheretima* and *Lumbricus*
123. The vascular system of the frog is
 a) Open type b) Closed type c) Double circulatory d) Portal
124. Ductless glands in human beings produces
 a) Saliva b) Bile c) Hormones d) Mucous
125. Read the given statements about blood vascular system of cockroach
 I. Circulatory system of cockroach is of closed type
 II. It contains no blood vessels except aorta heart
 III. Heart is 6 chambered
 IV. The haemolymph is composed of colourless plasma and haemocytes
 Which of the statements given above is/are incorrect
 a) Only I b) I, II and III c) I and III d) Only IV
126. Which statement is correct about simple cuboidal epithelium?
 a) It consists of a single layer of cube-like cells
 b) It is commonly found in ducts of glands
 c) Its main function is secretion and absorption
 d) All of the above
127. In a frog's body, which of the following is the largest gland?
 a) Liver b) Pancreas c) Gall bladder d) Stomach
128. Tendons and ligaments are
 a) Epithelial tissue b) Fibrous connective tissue
 c) Nerve tissue d) Muscular tissue
129. Read the given statements reference to the digestive system of cockroach
 I. Alimentary canal is divided into three regions
 II. Oesophagus opens into a sac like structure called crop
 III. The hind gut is broader than mid gut
 IV. The rectum opens through the anus
 Which of the statements given above is/are incorrect?
 a) I and IV b) II and III c) III and IV d) None of the above
130. The study of internal structure of an organism as revealed by dissection is known as
 a) Morphology b) Anatomy c) Internal appearance d) Physiology
131. On the basis of structures and functions animal tissues are classified into
 a) 3 types b) 2 types c) 1 type d) 4 types
132. The columnar epithelium in human body is found in
 a) Stomach b) Lungs c) Kidney d) Fallopian tube
133. Earthworm feeds upon
 a) Small animals b) Small plants
 c) Organic matter and decaying leaves d) All of the above
134. If a live earthworm is pricked with a needle on its other surface without damaging its gut, the fluid that may come out is
 a) Slimy mucous b) Excretory fluid c) Coelomic fluid d) Haemolymph
135. In frog, the blood from the heart is carried to all part of the body by

- a) Arteries b) Veins c) Vena cava d) Venules
136. Which of the following is the most abundant component of the human blood?
 a) RBCs b) Sodium (Na⁺) c) Blood platelets d) Cholesterol
137. From earthworm, two pairs of testes are present in the segments
 a) 10th-11th b) 11th-12th c) 12th-13th d) 13th-14th
138. Which one of the following leucocytes transforms into macrophages?
 a) Eosinophil b) Basophil c) Monocytes d) Lymphocyte
139. Identify *A, B, C* and *D* in the given figure of dorsal view of earthworm's body and choose the correct combination of option given below



- a) A-setae, B-Clitellum, C-Genital papillae, D-Anus
 b) A-Peristomium, B-Cilium, C-Male genital aperture, D-Base
 c) A-Prostomium, B-Metameres, C-Clitellum, D-Anus
 d) A-Annuli, B-Grooves, C-Metameres, D-Anus
140. Which of the following statements are incorrect in reference to the blood vascular system of the earthworm?
 I. Blood vascular system is of open type
 II. Smaller blood vessels supply the gut, nerve cord and the body wall
 III. Blood glands are present on 6th 7th and 8th segment
 IV. Blood cells are phagocytotic in nature
 a) Only I b) I and IV c) I and III d) II and III
141. Which of the following part of the cockroach helps in the removal of excretory products from the haemolymph?
 a) Rectum b) Malpighian tubule c) Lleum d) Cloaca
142. Blood of a cockroach contains
 a) Plasma and leucocytes b) Erythrocytes and plasma
 c) Erythrocytes and platlets d) All of these
143. Which one of the following cells is not a phagocytic cell?
 a) Macrophage b) Monocyte c) Neutrophil d) Basophil
144. Most radiosensitive tissue of body is
 a) Bone marrow b) Platelet c) Nervous tissue d) Lymphocyte
145. Squamous epithelium is found in the walls of
 a) Air sacs of lungs b) Kidney c) Fallopian tube d) Salivary glands
146. Consider the following statements
 I. Cells are compactly packed in the epithelial tissues with little intercellular matrix
 II. The cells secretes fibres of structural protein in all the connective tissues except blood
 III. Neuroglea is made up of more than one half the volume of neural tissue in our body
 IV. Muscles are made up of fibres
 Which of the above given is/are true?
 a) Only I b) I and III c) I and II d) I, II, III and IV
147. In a tissue the structure of cells varies according to their
 a) Origin b) Function c) Gene content d) None of these
148. In the hindlimb of the frog number of fingers is
 a) Six b) Five c) Three d) Four

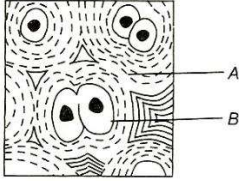
149. Which of the following activity is harmful for earthworm?
 a) Soil erosion b) Scavenging c) Fish bile d) Food
150. Role of spleen in mammals is to
 a) Control blood pressure b) Assist liver
 c) Act as haemopoietic tissue d) Assist kidneys
151. Each segment of the cockroach exoskeleton has hardened plates called
 a) Sclerites b) Carples
 c) Arthrodial membrane d) Ossicles
152. In earthworm, copulatory papillae are present on segment
 a) 17th to 19th b) 19th to 21st c) 21st to 23rd d) 23rd to 25th
153. In male reproductive the system of frog ...A... are 10-12 in number that arises from the testes. They enters the ...B... on their sides and opens into ...C...
 Identify A to C to complete the given statement
 a) Far bodies, kidney, adrenal gland
 b) Mesorchium, adrenal gland, urinary bladder
 c) Vasa efferentia, kidney, bladder's canal
 d) Vasa efferentia, kidney, urinogenital duct
154. Haemoglobin is
 a) An oxygen carrier in human blood b) A protein used as food supplement
 c) As oxygen scavenger in root nodules d) A plant protein with high lysine content
155. Identify the given figure and select the correct option pertaining to the series A, B and C



- a) A-Adipocyte, B-RBC, C-WBC b) A-Platelets, B-WBC, C-RBS
 c) A-RBC, B-WBC, C-Platelets d) A-Macrophages, B-RBC, C-Adipocyte
156. Which of the following nephridia in earthworm remain attached to the lining of the body wall of segment 3 to the last?
 a) Integumentary b) Pharyngeal c) Septal d) Dorsal
157. Nerve cells are the part of
 a) Epithelial tissue b) Connective tissue c) Muscles tissue d) Nervous tissue
158. In human body neuroglia cells occurs in the
 a) Liver b) Brain
 c) Kidney d) Brain and spinal cord
159. Histamine and heparin are secreted by
 a) Monocytes b) Neutrophils c) Eosinophils d) Basophils
160. Epimysium, perimysium and endomysium are found in
 a) Nerve b) Blood vessel c) Striated muscle d) Uterus
161. Carefully read the given statements about neurons and neuroglial cells of nervous tissue
 I. Neuroglial make up more than one-half volume of the neural tissue in our body
 II. Neuroglial cells protects and support the neurons
 III. Axon and dendrons are the part of neurons
 IV. When neuron is suitably stimulated, an electrical disturbance is generated, which travels along its cytoplasm
 Choose the correct statements form above given option
 a) I and II b) Only II c) III and IV d) Only IV
162. The abdomen of both male and female cockroaches consists of
 a) 9 segments b) 7 segments c) 10 segments d) 12 segments
163. Lymphocytes are formed by
 a) Plasma cells b) Mast cells c) Liver cells d) None of these

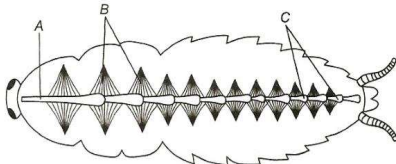
164. Which among the following is not a characteristic of yellow fibres of connective tissue?
 a) Presence of elastin
 b) Fewer in number
 c) Straight and branched
 d) Provide toughness and strength
165. In earthworm, a single female genital pore is present in the mid-ventral line of the segment number
 a) 14 th
 b) 16 th
 c) 15 th
 d) 17 th

166. In the given diagram of T.S. cartilage, identify *A* and *B*



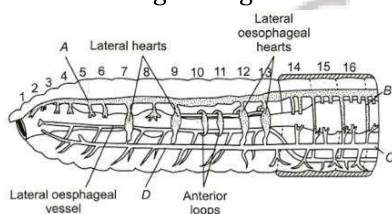
- a) A-Collagen; B-Chondrocyte
 b) A-Osteocyte; B-Collagen
 c) A-Microtubule; B-Osteocyte
 d) A-Chondrocyte; B-Collagen
167. Which of the following statements are incorrect regarding ciliated epithelium?
 I. Cells possess cilia on their free surface
 II. They bear microvilli at the free ends to increase surface area of the organ
 III. Mucous spreads over the epithelium as a thin layer
 IV. It is found in the lining of the small intestine
 a) I and III
 b) I and II
 c) II and IV
 d) III and IV
168. Which of the following helps in blood coagulation?
 a) Leucocytes
 b) Monocytes
 c) Lymphocytes
 d) Thrombocytes
169. The entire body of cockroach is covered by
 a) Skin
 b) Shell
 c) Hard chitinous exoskeleton
 d) Keratin
170. The contractile tissue that is present only in the heart is
 a) Cardiac tissue
 b) Areolar tissue
 c) Adipose tissue
 d) All of these
171. The skin of frog is slippery and smooth due to the presence of
 a) Mucous
 b) Gelatin
 c) Waxy skin
 d) Mucilage
172. During aestivation and hibernation of frog gaseous exchange takes place through the
 a) Skin
 b) Nose
 c) Lungs
 d) Scales
173. Which of the following segments in the earthworm's body are having no setae?
 a) First
 b) Last
 c) Clitellum
 d) All of these
174. Achilles tendon is associated with
 a) Gluteus muscle
 b) Hamstring muscle
 c) Quadriceps muscle
 d) Gastrocnemius muscle

175. Given below the figure of open circulatory system of cockroach. Identify *A*, *B* and *C* choose the correct options

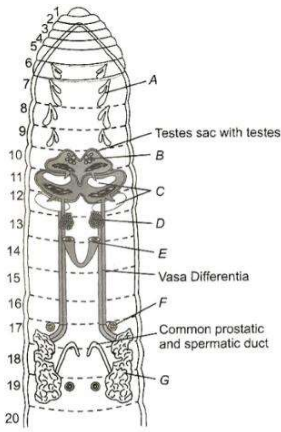


- a) A-Lateral aorta, B-Ciliary muscles, C-Chambers of heart
 b) A-Internal aorta, B-Alary muscles, C-Chambers of heart
 c) A-Anterior aorta, B-Alary muscles, C-Chambers of heart
 d) A-Posterior aorta, B-Fibrous muscles, C-Chambers of heart
176. Which of the following is the characteristic feature of the earthworm?
 a) Aquatic
 b) Cave dwellers
 c) Burrowing
 d) Nest making
177. Which among the following glands is known as ductless gland?
 a) Salivary glands
 b) Endocrine glands
 c) Exocrine glands
 d) None of the above

178. Which of the following is the function of spermathecae in the earthworm
 a) They receive eggs during copulation
 b) They receive and store spermatozoa during copulation
 c) It helps in the formation of sperms
 d) It receives spermatogonia for maturation
179. In the exoskeleton of the cockroach, sclerites are joined to each other by
 a) Ossicles b) Arthroal membrane c) Amino acids d) Chitin
180. Choose the incorrect statement about skeletal muscles
 I. Tissues are closely attached to bones
 II. A sheath of tough connective tissue encloses several bundles of muscle fibres
 III. These are involuntary in their action
 IV. These are present in the blood vessels
 a) I and II b) II and III c) III and IV d) I and IV
181. In the digestive system of cockroach gastric caecae is present at the junction of
 a) Mid gut and hind gut
 b) Hind gut and fore gut
 c) Fore gut and mouth
 d) Mid gut and fore gut
182. Areolar connective tissue joins
 a) Fat body with muscles b) Integument with muscles
 c) Bones with muscles d) Bone with bones
183. In frog, the main function of the bile juices is
 a) Emulsification of fat b) Digestion of carbohydrate
 c) Digestion of proteins d) Metabolism of lipids
184. The average diameter of red blood corpuscles of man is
 a) 7.2 μ m b) 8.1 μ m c) 9.2 μ m d) 10.3 μ m
185. Observe the given figure of closed circulatory system of earthworm and identify A, B, C and D

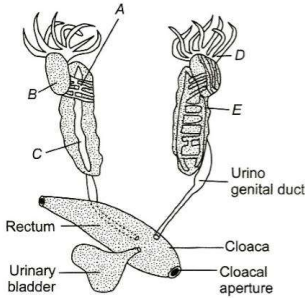


- a) A-Ventral vessel, B-Subneural vessel, C-Commissural vessel, D-Dorsal vessel
 b) A-Subneural vessel, B-Ventral vessel, C-Dorsal vessel, D-Commissural vessel
 c) A-Dorsal vessel, B-Commissural vessel, C-Subneural vessel, D-Ventral vessel
 d) A-Commissural vessel, B-Dorsal vessel, C-Ventral vessel, D-Subneural vessel
186. Fibroblasts, macrophages and mast cells are seen in
 a) Epithelial tissue b) Connective tissue
 c) Skeletal muscle tissue d) Smooth muscle tissue
187. The female reproductive system of the cockroach consists of
 a) Two large ovaries
 b) Three large ovaries
 c) One large ovaries
 d) Four large ovaries
188. Which of the following tissue performs the function of linking and supporting other tissue of the body?
 a) Epithelial tissue b) Muscular tissue c) Connective tissue d) Nervous tissue
189. Which of the following nephridia is also called as enteronephric nephridia in earthworm?
 a) Pharyngeal nephridia b) Septal nephridia
 c) Integumentary nephridia d) Both (a) and (b)



- a) A-Ovary, B-Spermathecae, C-Spermiducal funnels, D-Prostate gland, E-Accessory gland, F-Ovarian funnel, G-Seminal vesicles
- b) A-Spermathecae, B-Spermiducal funnels, C-Seminal vesicles, D-Ovary, E-Ovarian funnel, F-Accessory gland, G-Prostate gland
- c) A-Ovarian funnel, B-Ovary, C-Spermathecae, D-Seminal vesicles, E-Prostate gland, F-Spermiducal funnels, G-Accessory gland
- d) A-Seminal vesicles, B-Ovarian funnel, C-Ovary, D-Accessory gland, E-Spermiducal funnels, F-Prostate gland, G-Spermathecae

210. Identify A, B, C and D in the given figure of male reproductive system of frog



- a) A-Fat bodies, B-Testis, C-Ureters, D-Vasa efferentia, E-Kidney
- b) A-Nephrons, B-Testis, C-Ureters, D-Villi, E-Kidney
- c) A-Vasa efferentia, B-Testis, C-Adrenal gland, D-Fat bodies, E-Kidney
- d) A-Mesorchium, B-Testis, C-Adrenal gland, D-Fat bodies, E-Kidney

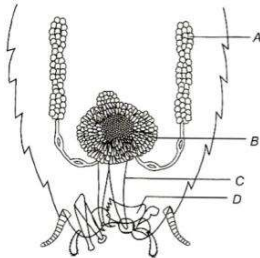
211. In frog, cloaca is an opening of

- a) Excretory ducts
- b) Reproductive ducts
- c) Both (a) and (b)
- d) None of these

212. In frog, excess of the bile juices secreted by the liver is stored by

- a) Intestine
- b) Pancreas
- c) Gall bladder
- d) Rectum

213. Study the given figure of male reproductive system of cockroach. In which of the following part (A, B, C and D) sperms are stored



- a) A
- b) B
- c) C
- d) D

214. Which of the following segments constitute the thorax of the cockroach?

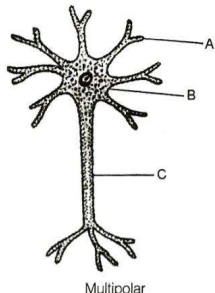
- a) Prothorax and prethorax

- b) Prothorax and mesothorax
- c) Mesothorax and metathorax
- d) Prothorax, mesothorax and metathorax

215. Which is not phagocytic?

- a) Monocyte
- b) Lymphocyte
- c) Mast cell
- d) Neutrophil

216. Identify A to C in the given diagram of multipolar neuron



- a) A-Dendrites, B-Cyton, C-Axon
- b) A-Axon, B-Cyton, C-Dendrites
- c) A-Cyton, B-Axon, C-Dendrite
- d) A-Axon, B-Dendrites, C-Cyton

217. The cloaca in frog is a common chamber for the urinary tract, reproductive tract and

- a) Alimentary canal
- b) Portal system
- c) Hepatic portal vessels
- d) Notochord

218. This Malpighian tubules in cockroach are present at the junction of

- a) Fore gut and mid gut
- b) Mid gut and hind gut
- c) Fore gut and hind gut
- d) Mid gut and gizzard

219. Blood vascular system of the cockroach is of

- a) Open type
- b) Closed type
- c) Portal type
- d) None of these

220. The type of epithelial cells, which line the inner surface of fallopian tubes, bronchioles and small bronchi, are known as

- a) Squamous epithelium
- b) Columnar epithelium
- c) Ciliated epithelium
- d) Cubical epithelium

221. Which of the following is not granulocyte?

- a) Basophils
- b) Monocytes
- c) Acidophils
- d) Neutrophils

222. Alimentary canal wall contains

- a) Striated muscles
- b) Striped muscles
- c) Smooth muscles
- d) None of these

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

- a) Lung
- b) Spleen
- c) Liver
- d) Kidney

224. Note the following statements.

- 1. It forms the lining of the cavities of alveoli of the lungs.
 - 2. It forms the lining of wet surface like buccal cavity and oesophagus.
 - 3. It occurs in the ducts of sweat glands.
 - 4. It forms the lining of salivary glands and sweat glands.
- It is a loose connective tissue.

Which of the above statements are associated with simple epithelial tissue?

- a) I and IV
- b) II and III
- c) III and I
- d) IV and V

225. In earthworm, a pair of male genital pores are present on the ventro-lateral side of the segment

- a) 20 th
- b) 19 th
- c) 18 th
- d) 17 th

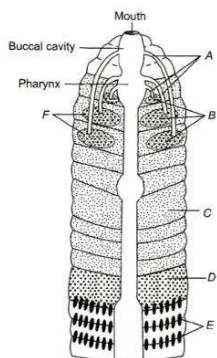
226. In cockroach, fertilised eggs are stored in

- a) Oothcae
- b) Cocoon
- c) Genital pouch of female
- d) Gonapophyses

227. Excretory system of the frog consists of

- a) Pair of kidneys, ureters, urinary bladder, cloaca

- b) Single kidney, urinary bladder and cloaca
 c) Kidney, and cloaca only
 d) Urethra and cloaca only
228. Which of the following does not match?
 a) (a) Muscular movement - ATP
 b) (b) Heart-pace - maker
 c) (c) Monocyte - Haemoglobin
 d) (d) Nerve - acetylcholine
229. Gizzard in earthworm help in
 a) Emulsifying fat
 b) Releasing digestive juice
 c) Crushing or grinding food
 d) Excretion of waste material
230. Which of the following statement is incorrect regarding connective tissues?
 a) They perform the function of linking and supporting the other tissues
 b) They are most abundant and widely distributed in the body of animals
 c) They are classified into four types
 d) They include cartilage, bone, adipose and blood
231. Which of the following statement is correct in reference with the frog?
 I. Eyes are bulged and covered by nictitating membrane
 II. Membranous tympanum receives the sound signals
 III. The frog never drinks water
 IV. A pair of nostrils is preset above the mouth
 a) I and II
 b) III and IV
 c) I and IV
 d) I, II, III and IV
232. In female cockroach, shape of the 7th sternum is
 a) Oval
 b) Circular
 c) Boat shaped
 d) Spiral
233. Which one of the following contains the largest quantity of extracellular material?
 a) Stratified epithelium
 b) Myelinated nerve fibres
 c) Striated muscle
 d) Areolar tissue
234. Excretory matter of the earthworm is mainly
 a) Nigroneous waste
 b) Urea
 c) Ammonia
 d) None of these
235. Ommatidia of the cockroach is
 a) Visual unit
 b) Hearing unit
 c) Sensory unit
 d) None of these
236. Which of the following nephridia is responsible for exonephric excretion in earthworm?
 a) Septal nephridia
 b) Pharyngeal nephridia
 c) Integumentary nephridia
 d) All of these
237. Which of the following branch of science deals with the study of externally visible features?
 a) Anatomy
 b) Morphology
 c) Physiology
 d) Cytology
238. The midbrain of the frog is characterised by a pair of
 a) Cerebral hemisphere
 b) Cerebellum
 c) Optic lobes
 d) Olfactory lobes
239. The process of increasing fertility of the soil by the earthworm is known as
 a) Composting
 b) Vermicomposting
 c) Manuring
 d) Green manuring
240. Which of the following statements is/are incorrect with reference to *Rana tigrina*?
 I. They do not have constant body temperature
 II. Their skin is smooth and slippery due to the presence of a gelatinous sheath
 III. Ventral side of the skin is pale yellow in colour
 IV. It is also known as bull frog in India
 a) I and II
 b) II and III
 c) Only II
 d) I, II, III and IV
241. Examine the given figure of nephridial system in earthworm and identify A, B, C, D, E and F



- a) A-Tufts of pharyngeal nephridia, B- Forest of integumentary nephridia, C-Septal nephridia, D- Integumentary nephridia, E-Blood glands, F-Ducts of pharyngeal nephridia
- b) A- Forest of integumentary nephridia, B-Septal nephridia, C-Integumentary nephridia, D-Blood glands, E-Ducts of pharyngeal nephridia, F-Tufts of pharyngeal nephridia
- c) A-Ducts of pharyngeal nephridia, B-Tufts of pharyngeal nephridia, C-Integumentary nephridia, D- Forests of integumentary nephridia, E-Septal nephridia, F-Blood glands
- d) A-Blood vessels, B-Blood gland, C-Septal nephridia, D-dorsal nephridia, E-pharyngeal nephridia, F- Integumentary nephridia

242. Cartilage are distinguished from bone by

- a) Chondrin
- b) Collagen
- c) Calcium
- d) Haversian canal

243. The ciliated columnar epithelial cells in humans are known to occur in

- a) Bronchioles and fallopian tubes
- b) Bile duct and oesophagus
- c) Fallopian tubes and urethra
- d) Eustachian tube and stomach lining

244. The muscles surrounding the pupil of rabbit's eye are

- a) Unstriated and involuntary
- b) Striated and voluntary
- c) Unstriated and voluntary
- d) Striated and involuntary

245. In the respiratory system of cockroach, trachea opens through 10 pairs of small holes called spiracles. The part of integument supporting spiracles is

- a) Bronchioles
- b) Alveoli
- c) Peritreme
- d) Tracheoles

246. Microscopic study of tissues is known as

- a) Histology
- b) Microbiology
- c) Cytology
- d) Pathology

247. Blood cells of the earthworm are..... in nature

- a) Exocytotic
- b) Endocytotic
- c) Phagocytotic
- d) Osmotic

248. Gametes are derived from which of the following tissues in animals?

- a) Connective tissue
- b) Nervous tissue
- c) Germinal epithelial tissue
- d) Muscular tissue

249. Life period of mammalian erythrocytes is

- a) 120 days
- b) 180 days
- c) 140 days
- d) 220 days

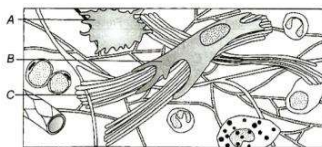
250. Cockroaches are placed in the phylum-Arthropoda because

- a) Chewing mouth parts
- b) Presence of wings
- c) Chitinous exoskeleton
- d) Joined appendages

251. Heparin

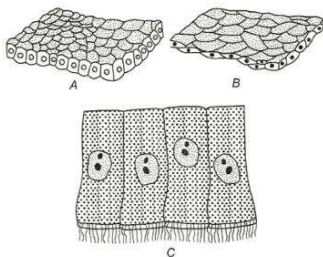
- a) Is antiserum
- b) Helps in clotting
- c) Helps in secretion
- d) Is anticoagulant

252. Identify A to C in the given diagram of areolar tissue



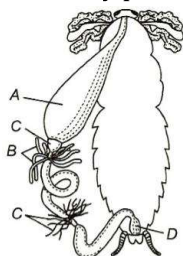
- a) A-Macrophage, B-Fibroblast, C-Collagen fibres
- b) A-Mast cells, B-Collagen fibres, C-Plasma membrane
- c) A-Chondrocyte, B-Fat storage area, C-Plasma membrane

- d) A-fibroblast, B-Macrophages, C-Mast cells
253. Exchange of gases takes place in cockroaches by the process of
 a) Diffusion b) Osmosis c) Expiration d) None of these
254. The colour of the ventral side of the forgs skin is
 a) Olive green b) Pale yellow c) Brownish d) Lightish black
255. Which of the following are the wax secreting cells in cockroach?
 a) Trichogen cells b) Tormogen cells c) Oenocytes cells d) Glandular cells
256. Minimum regeneration power is present in
 a) Nervous tissue b) Connective tissue c) Epithelial tissue d) None of these
257. How many fertilised eggs are present in the oothecae of cockroach?
 a) 14 -16 b) 19 – 24 c) 20 – 25 d) 25 – 30
258. In female cockroach, the 7th sternum together with the 8th and 9th sterna forms a
 a) Collateral gland b) Gonopore c) Genital pouch d) Anal cercus
259. Identify A, B and C following figures of simple epithelium tissue

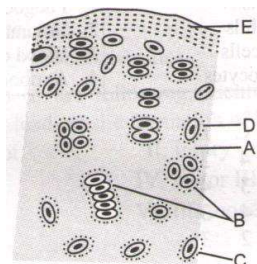


- a) A-Ciliated columnar, B-Squamous, C-Cuboidal b) A-Cuboidal, B-Squamous, C-Ciliated columnar
 c) A-Squamous, B-Ciliated columnar, C-Cuboidal d) A-Ciliated columnar, B-Cuboidal, C-Squamous
260. *Pheretima* has
 a) One eyes b) Two eyes c) No eyes d) Many eyes
261. Debove's membrane is a layer of
 a) Muscular tissue b) Epithelial tissue c) Connective tissue d) All of these
262. 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
263. Which one of the following human cells do not contain mitochondria?
 a) Nerve cell b) Red blood cells c) Liver cell d) White blood cells
264. The process of formation of blood corpuscles is called
 a) Haemopoiesis b) Haemolysis c) Haemozoin d) None of these
265. The lining of intestine and kidneys in human is
 a) Keratinized b) Brush bordered c) Ciliated d) None of these
266. In male cockroach, genital pouch contains
 a) Dorsal anus, ventral genital pore and gonapophysis
 b) Dorsal anus, gonopore and gonapophysis
 c) Ventral anus, dorsal spermathecal pore, gonapophysis
 d) Gonopore, spermathecal, pores and collateral glands
267. The frog is
 a) Ureotelic animal b) Ammonotellic animal
 c) Urecotelic animal d) None of these
268. The is a straight tube which runs between the first to last segment of the earthworm's body
 a) Pharynx b) Intestine c) Stomach d) Alimentary canal
269. In male reproductive system of the cockroach, spermatheca is present in the
 a) 7th segment b) 6th segment c) 5th segment d) 4th segment
270. How many eyelid membranes are present in frog?
 a) One b) Two c) Three d) Four

271. Which of the following statement is incorrect in relation to frog?
 I. Development of frog is indirect
 II. Frog feeds on small insect, tadpole and smaller frogs
 III. Their croaking in the call for mating
 IV. They breeds in any season
 a) Only I b) II and III c) Only III d) Only IV
272. In cockroaches, spermatozoa are stored in
 a) Conglobate gland b) Seminal vesicles c) Testes d) Vas deferens
273. In earthworm, nephridium collects the excess of fluid from the
 a) Septal chamber b) Nephridial chamber c) Coelomic chamber d) Gizzard chamber
274. Study the given figure of alimentary canal of cockroach. Identify the parts that helps in the removal of excretory products from the haemolymph



- a) A b) B c) C d) D
275. The main role of calciferous glands present in stomach of earthworm is
 a) Secreting mucous
 b) Breaking food particles
 c) Absorption of nutrients
 d) Neutralising the humic acid present in humus
276. In the diagram of section of hyaline cartilage, the different parts have been indicated by alphabets. Choose the answer in which these alphabets correctly match with the parts they indicate.



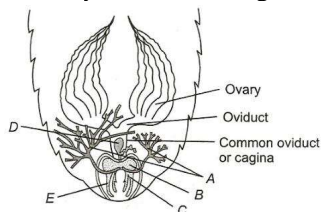
- a) A-Perichondrium, B-Chondrocyte, C-Lacuna, D-Capsular matrix, E-Chondrin
 b) A- Capsular matrix, B- Chondrocyte, C- Lacuna, D- Perichondrium, E- Chondrin
 c) A- Chondrin, B- Chondrocyte, C- Lacuna, D- Capsular matrix, E- Perichondrium
 d) A- Chondrin, B- Lacuna, C-Chondrocyte, D- Capsular matrix, E- Perichondrium
277. Each organ of human body is made up of one or more type of
 a) Tissue b) Cells c) Parts d) Layers
278. In which of these, would you find white fibrous tissue in abundance?
 a) Cartilage b) Bone c) Ligament d) Tendon
279. Each muscle is made up of long, cylindrical fibres arranged in parallel arrays. These fibres are composed of numerous fine fibrils called
 a) Myofibrils b) Microfilament c) Fibroblast d) None of these
280. Ions that must be present for binding the cross bridges is
 a) Na⁺ b) Ca²⁺ c) K⁺ d) Mg⁺
281. Human heart consists of types of tissues
 a) Three b) Four c) Two d) One
282. Which of the following statement is incorrect with reference to frog?

- a) Teeths are present on the lower jaw of the frog
- b) Amplexusory pads develops on the inner finger of each hand of the male frog
- c) Brow spot represents the vestigial pineal eye in frog
- d) Eggs of frog are mesolecithal and telolecithal

283. Which of the following organs is called the graveyard of RBCs?

- a) Thymus
- b) Liver
- c) Spleen
- d) Kidney

284. Identify A to F in the given diagram of female reproductive system of cockroach



- a) A-Colateral glands, B-Vestibulum, C-Genital chamber, D-Spermatheca, E-Gonapophysis
- b) A-Vestibulum, B-Colateral gland, C- Gonapophysis, D-Spermatheca, E-Genital chamber
- c) A-Colateral gland, B-Genital chamber, C-Vestibulum, D-Spermatheca, E-Gonapophysis
- d) A-Genital chamber, B-Spermatheca, C-Colateral gland, D- Gonapophysis, E-Vestibulum

285. In which of the following tissues is the matrix not a product of synthesis of its cells?

- a) Muscular tissue
- b) Osseus tissue
- c) Loose connection tissue
- d) Adipose tissue

286. Compound squamous epithelium is found in

- a) Stomach
- b) Intestine
- c) Trachea
- d) Pharynx

287. In earthworms, cocoons are found in

- a) 14th, 15th and 16th segment
- b) 19th, 20th and 22th segment
- c) 15th, 16th and 17th segment
- d) 7th, 8th and 9th segment

288. Choose the incorrect pair from the matches given below

- a) Antennae – Sensory receptors
- b) Metathoracic wings - Flying
- c) Malpighian tubule – Excretory role
- d) Crop – Grinding food

289. Faecal deposits of earthworm are known as

- a) Organic matter
- b) Castings
- c) Dung
- d) Manure

290. In the female reproductive system of cockroach ovaries are located in which of the following abdominal segments?

- a) 2nd-6th
- b) 4th-8th
- c) 6th-2th
- d) 1st-2nd

291. Blood cells involved in inflammatory reactions are

- a) Basophils
- b) Neutrophils
- c) Eosinophils
- d) Monocytes

292. Which of the following are not true cells in the blood?

- a) Platelets
- b) Monocytes
- c) Neutrophils
- d) Basophils

293. Which of the following are phagocytic in nature?

- a) Netrophil, monocyte and basophil
- b) Neutrophil, monocyte and macrophage
- c) Neutrophil, basophil and macrophage
- d) Acidophil, basophil and lymphocyte

294. Which of the following is a transparent tissue?

- a) Tendon
- b) Fibrous cartilage
- c) Hyaline cartilage
- d) All of these

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

- a) Tight junction
- b) Adhering junction
- c) Gap junction
- d) Desmosomes

296. In cockroach, larval and nymphal characters are maintained by

- a) Ecdysone
- b) Salivary glands
- c) Parotid glands
- d) Juvenile hormone

297. Bone marrow is made up of

- a) Muscular fibre and fatty tissue
- b) Fatty tissue and areolar tissue
- c) Fatty tissue and cartilage
- d) Fatty tissue, areolar tissue and blood vessel

298. Which of the following animal is unisexual?

- a) Tapeworm b) Sponge c) Leech d) Earthworm
299. Which of the following prevents the conversion of prothrombin to thrombin in an undamaged blood vessel?
- a) Heparin b) Calcium ions c) Thromboplastin d) Fibrinogen
300. Find out the wrong match.
- a) Eosinophils – allergic response b) Basophils – secrete histamine and serotonin
c) Neutrophils – phagocytic and destroy foreign organism d) Monocytes – secrete heparin
301. Forelimbs and hindlimbs of a frog helps in
- a) Swimming b) Walking c) Leaping d) All of these
302. In male frog, cloaca is a small median chamber that is used to pass
- a) Sperms b) Urine c) Faecal matter d) All of these
303. Select the correct order of classification of *Rana tigrina* up to genus
- a) Chordata, Craniata, Amphibia, Gnathostomata, *Rana*
b) Chordata, Craniata, Gnathostomata, Amphibia, *Rana*
c) Chordata, Amphibia, Gnathostomata, Craniata, *tigrina*
d) Chordata, Craniata, Amphibia, Gnathostomata, *tigrina*
304. Collagen fibres are secreted by
- a) Mast cells b) Macrophage c) Histiocytes d) fibroblasts
305. Which of the following tissue forms the epidermis of the skin in land vertebrates?
- a) None-keratinised stratified squamous epithelium
b) Keratinised stratified squamous epithelium
c) Stratified ciliated columnar epithelium
d) Stratified cuboidal epithelium
306. Adipose tissue perform which of the following the function?
- a) Producing fat b) Dissolving fat c) Storing fat d) All of these
307. Which of the following epithelium type helps in the secretion and absorption of nutrients?
- a) Cuboidal
b) Stratified squamous
c) Squamous
d) Columnar
308. Myelinated nerve fibres are white coloured because of
- a) Chromidial substance b) Neurolemma c) Myelin d) None of these
309. Nails, hoofs and horns are examples of
- a) Bone b) Cartilage
c) Connective tissue d) Epidermal derivatives
310. In cockroach the heart is
- a) Muscular and tube-like b) Three chambered
c) Membranous d) Small
311. Which of the following types of cartilage is found in intervertebral disc of mammal?
- a) Hyaline cartilage b) Fibrous cartilage c) Calcified cartilage d) Elastic cartilage
312. Which of the following statement is incorrect regarding cockroach (*Periplaneta americana*)?
- a) Cockroaches belongs to the phylum – Arthropoda b) Cockroaches are nocturnal animals
c) Cockroaches are cornivourous animals d) Cockroaches have long antenna and legs
313. Hypochromic microcytic anaemia and leucopenia are caused by the deficiency of respectively.
- a) Pyridoxine and riboflavin b) Pyridoxine and folacin
c) Biotin and folacin d) Biotin and cyanocobalamine
314. Carotene pigment is found in the cells of
- a) Dermis b) Epidermis c) Adipose cell d) Both (b) and (c)
315. The function of typhosole in earthworm is

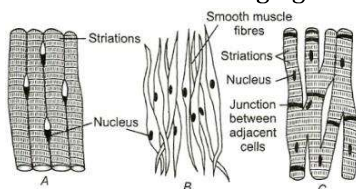
- a) Grinding soil particles
c) Purifying blood
316. Peyer's patches produce
a) Mucus b) Trypsin c) Lymphocytes d) Enterokinase
317. Which of the following statement is/are incorrect *Periplanata americana*?
I. They are nocturnal omnivores that lives in the damp places
II. Its body is segmented and divisible in two region-head and abdomen
III. Antennae have sensory receptor to monitor the environment
IV. Head can move in all direction due to the presence of movable neck
The correction option is
a) I and IV b) Only II c) Only IV d) II and III
318. The mouth part of a cockroach are said to be
a) Absorbing type b) Biting and absorbing type
c) Biting and chewing type d) Biting and sucking type
319. The longest podomere in the leg of cockroach is
a) Tibia b) Trochanter c) Femur d) Tarsus
320. In earthworm a nerve cord is
a) Single, spongy and posterior
b) Paired, solid and ventral
c) Paired, hollow and dorsal
d) Single, solid and ventral

321. With the help of the following, identify the correct sequence, that leads to the formation of blood clot.

- I. Blood clot
II. Injury
III. Factor II
IV. Factor III
V. Factor IV
VI. Fibrinogen
VII. thrombin

- a) II → III → IV → VI → VII → I
c) IV $\xrightarrow{+e}$ IV → II → III → VII → VI → I
- b) II → III → VII → VI → I
 $\uparrow e^+$
d) II → IV → III → VI → VII → I
 $\uparrow e^+$

322. In animals, gametes are derived from
a) Germinal epithelial tissue b) Nervous tissue
c) Connective tissue d) Muscular tissue
323. Bone marrow of long bones are the sites of
a) Production of WBCs b) Production of RBCs c) Production of blood d) Breakdown of RBCs
324. The outer covering of cartilage is called
a) Peritoneum b) Periosteum c) Endosteum d) Perichondrium
325. In female cockroach, anterior part of the genital pouch contains
a) Gonopore b) Spermathecal pores c) Collateral glands d) All of these
326. Examine the following figures, identify A, B, and C and choose the correct option



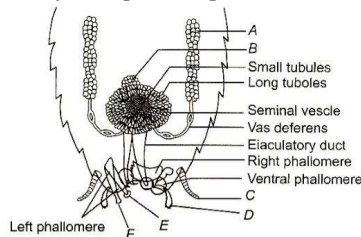
- a) A-Skeletal muscle, B-Voluntary muscle, C-Cardiac muscle
b) A-Skeletal muscle, B-Smooth muscle, C-Cardiac muscle

- c) A-Cardiac muscle, B-Skeletal muscle, C-Smooth muscle
- d) A-Smooth muscle, B-Cardiac muscle, C-Skeletal muscle

327. In earthworm, the alimentary canal open to the exterior by a small rounded aperture known as
 a) Mouth b) Stomach c) Anus d) Typhsole

328. The type of epithelium seen in the walls of blood vessels is
 a) Squamous epithelium b) Columnar epithelium
 c) Ciliated epithelium d) Cuboidal epithelium

329. Study the given figure of male reproductive system of cockroach and identify the following parts



- I. Anal cerci II. Testis
- III. Pseudo penis IV. Phallic Acid
- V. Caudal style VI-Titillator
- A B C D E F

- a) IV III II I V VI b) II I VI IV II V
- c) I II III IV VI V d) II IV I V III VI

330. Earthworm is a
 a) Unisexual animal b) Multisexual animal c) Bisexual animal d) Asexual animal

331. The cavities of alveoli of lungs are lined by
 a) Cuboidal epithelium b) Columnar epithelium
 c) Stratified cuboidal epithelium d) Squamous epithelium

332. Cockroaches can climb smooth or steep surfaces due to the presence of adhesive pads found on the tarsus of their legs
 a) Pretarsus b) Arolium c) Plantulae d) Tibia

333. Which of the following types of leucocytes secretes heparin and histamine?
 a) Acidophils b) Monocytes c) Basophils d) Neutrophils

334. Earthworm can distinguish the light intensities and feel the vibration in the ground through
 a) Eyes b) Mechanical receptor
 c) Receptor cells d) Chemoreceptors

335. Which of the following organ regulates the volume and composition of the body fluids of earthworm?
 a) Stomach b) Nephridia c) Heart d) Intestine

336. The blood vascular system of the frog consists of
 a) Heart, blood vessels and blood without haemoglobin
 b) Blood vessels, capillaries and heart of neurogenic type
 c) Haemolymph, blood vessels and heart
 d) Artries, veins, capillaries heart and blood

337. Which of the following is not a characteristic features of frog?
 a) Brow spot b) Hallux c) Amplexusory pads d) None of the above

338. In which one of the following preparations, you likely to come across cell junctions most frequently?
 a) Ciliated epithelium b) Thrombocyte c) Tendon d) Hyaline cartilage

339. The kind of tissue that forms the supportive structure in our pinna (external ears) is also found in
 a) Vertebrae b) Nails c) Ear ossicles d) Tip of the nose

340. acts as a shock absorber to cushion when tibia and femur came together.
 a) Ligament b) Cartilage c) Tendon d) Disc

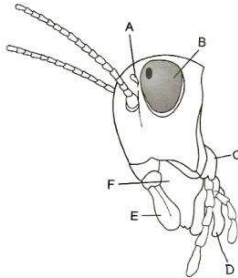
341. The head capsule of the cockroach bears

- a) No eyes b) One eyes c) Two eyes d) Many eyes
342. In frog, undigested solid waste passes out through
a) Rectum b) Cloaca c) Anus d) Intestine

343. Consider the following statements about *Rana tigrina*
I. The skin of frog sheds after every few weeks
II. Camouflage is a common defensive mechanism of frog
III. Chest muscles are involved in the process of respiration
IV. Their nervous system consists of a brain, spinal cord and nerves
Which of the above statement is incorrect?

- a) Only I b) I and III c) Only III d) I and IV
344. Heart of the frog is covered by a membrane called
a) Pericardium b) Plasma membrane c) Pleuromembrane d) Dura matter

345. The given figure is related with the head region of cockroach. Identify A to F the correct combination of options



- a) A-Maxilla, B-Compound eye, C-Ocellus, D-Labrum, E-Labium, F-Mandible
b) A-Ocellus, B-Compound eye, C-Maxilla, D-Labium, E-Labium, F-Mandible
c) A-Ocellus, B-Compound eye, C-Maxilla, D-Labrum, E-Labium, F-Mandible
d) A-Mandible, B-Compound eye, C-Maxilla, D-Ocellus, E-Labrum, F-Labium
346. The body of the cockroach is segmented and divisible into
a) Head and tail b) Head and thorax
c) Head and abdomen d) Head, thorax and abdomen

347. Metamorphosis occur in a life history of
a) Frog b) Earthworm c) Man d) Rat

348. Study the following statements
I. It forms the lining of the cavities of alveoli of the lungs
II. It occurs in the ducts of sweat glands
III. It forms the lining of salivary glands and glands
IV. It is a loose connective tissue

- Which of the above statements are associated with the simple epithelial tissue
a) I and III b) II and III c) III and IV d) IV and I

349. Endothelium is made up of
a) Squamous cells b) Cuboidal cells c) Columnar cells d) Stratified epithelium

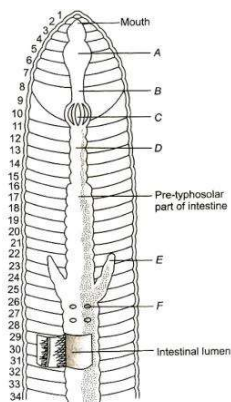
350. Which of the following sense organ in frogs is not the cellular aggregation around the nerve ending?
a) Eyes b) Sensory papillae
c) Taste bud d) Nasal epithelium

351. Bidder's canal is present in
a) Testes of frog b) Kidney of frog c) Kidney of rabbit d) Both (a) and (c)

352. In both the sexes of cockroaches, the 10th segment bears a pair of joined filamentous structure called
a) Anal style b) Anal cerci c) Gonapophysis d) Spermathecal pores

353. Bowman's glands are located in the
a) Proximal end of uriniferous tubules b) Anterior pituitary gland
c) Female reproductive system of cockroach d) Olfactory epithelium of nose

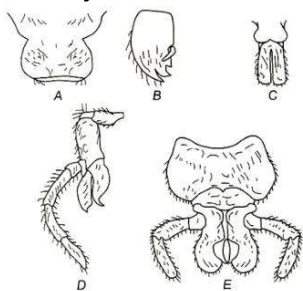
354. Matrix secreting cells of cartilage are known as
 a) Chondrocytes b) Osteoblasts c) Fibroblasts d) Mast cells
355. In which part of the earthworm sense organs are most concentrated?
 a) Posterior part b) Anterior part c) Middle part d) None of these
356. The number of spiracles present in cockroaches are
 a) 9 pairs b) 10 pairs c) 12 pairs d) 14 pairs
357. The respiration by lungs in frog is called
 a) Pulmonary respiration
 b) Pericardial respiration
 c) Alveolar respiration
 d) None of these
358. For capturing the prey frog uses its
 a) Lips b) Teeth c) Tongue d) Hand
359. RBC_s are nucleated in
 a) Man b) Rabbit c) Frog d) All of these
360. Consider the following statements about the hind wings of cockroach
 I. These are broad and thin
 II. They are not used in flying
 III. They are also known as mesothoracic wings
 IV. They are transparent and delicate
 Which of the statements given above is/are incorrect?
 a) Only I b) II and III c) I and IV d) I, II, III and IV
361. In terms of descending order of percentage proportions of leucocytes in human blood, which one is correct?
 a) Neutrophils → lymphocytes → monocytes → eosinophils → basophils
 b) Neutrophils → basophils → lymphocytes → eosinophils → monocytes
 c) Neutrophils → monocytes → lymphocytes → eosinophils → basophils
 d) Neutrophils → eosinophils → basophils → lymphocytes → monocytes
362. Mark the odd one.
 a) Monocytes b) Lymphocytes c) Neutrophils d) Erythrocytes
363. The epithelial tissue present on the inner surface of bronchioles and fallopian tubes is
 a) Cuboidal b) Glandular c) Ciliated d) Squamous
364. Categorisation of secretory gland can be done on the basis of
 a) Mode of pouring of their secretion b) Mode of breaking down of molecules
 c) Mode of segregation of products d) None of the above
365. Observe the following figure of alimentary canal of earthworm and identify *A, B, C, D, E* and *F*



The correct options is

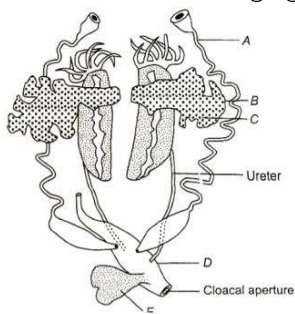
- a) A-Oesophagus, B-Pharynx, C-Stomach, D-Gizzard, E-Typhosole, F-Intestine
 b) A-Pharynx, B-Oesophagus, C-Gizzard, D-Stomach, E-Intestinal calcum, F-Lymph gland

- c) A-Gizzard, B-Pharynx, C-Oesophagus, D-Lymph gland, E-Stomach, F-Typhosole d) A-Typhosole, B-Gizzard, C-Pharynx, D-Typhosole, E-Lymph gland, F-Stomach
366. In earthworms, secretory gland cells are present on
 a) Epidermis b) Nephridopores c) Metameres d) Clitellium
367. Which of the following is known as fossorial animal?
 a) Frog b) Earthworm c) Cockroach d) Rabbit
368. The ventral surface of the body of earthworm is distinguished by
 a) Blood vessels b) Mouth c) Genital pores d) Segment size
369. Mast cells secrete
 a) Serotonin b) Heparin c) Histamine d) All of these
370. Cockroach belongs to
 a) Class Insect of phylum – Echinodermata
 b) Class Amphibia of phylum – Reptelia
 c) Class Insect of phylum – Arthropoda
 d) Class Insect of phylum – Annelida
371. Tendon is an example of which of the following connective tissue?
 a) Loose connective tissue b) Dense connective tissue
 c) Specialised connective tissue d) All of the above
372. The number of fingers in the forelimb of frog is
 a) Three b) Four c) Five d) Six
373. Blood glands are present on which segments of the earthworm?
 a) 4th, 5th and 6th b) 3rd, 4th and 5th c) 2nd, 3rd and 4th d) 5th, 6th and 7th
374. Hindbrain of a frog consists of
 a) Cerebellum and medulla oblongata
 b) Olfactory lobes and cerebral hemispheres
 c) A pair of optic lobes
 d) Cerebrum and cranium
375. Forewings of the cockroach are known as
 a) Tegmina b) Spiracles c) Tergia d) Coxa
376. A pair of spermatheca is present in the 6th segment of the cockroach which opens into
 a) Genital chamber b) Anus c) Rectum d) Vagina
377. Identify *A, B, C, D* and *E* in a given figure related with mouth parts of the cockroach



- a) A-Mandible, B-Labium, C-Labrum, D-Maxilla, E-Hypopharynx b) A-Labium, B-Labrum, C-Mandible, D-Hypopharynx, E-Maxilla
- c) A-Labrum, B-Mandible, C-Hypopharynx, D-Maxilla, E-Labium d) A-Hypopharynx, B-Maxilla, C-Labium, D-Labrum, E-Mandible
378. Which of the following series of events is correct about the digestive system of frog?
 I. Prey → Mouth → Oesophagus → stomach → Small intestine → Cloaca
 II. Prey → Mastication by teeth → Stomach → Small intestine → Cloaca
 III. Tongue → Prey → Teeth → Stomach → Large intestine → Cloaca
 IV. Prey → Mouth → Teeth → Pharynx → Stomach → Small intestine → Rectum
 a) Only I b) I and II c) I and III d) III and IV

379. On an average, female cockroach produces oothecae
 a) 7 – 8 b) 9 – 10 c) 8 – 9 d) 10 – 11
380. Metamorphosis in frog is initiated by the production of hormone
 a) Thyroxine b) Thyroid c) Insulin d) Parathyroxine
381. In earthworm *Pheretima*, a prominent dark band of glandular tissue (clitellum) is present in the segments number
 a) 10, 11, 12 b) 13, 14, 15 c) 14, 15, 16 d) 15, 16, 17
382. Which of the following statement is incorrect about the female reproductive system of frog?
 I. Reproductive organs includes a pair of ovaries
 II. Ovary has functional connections with kidneys
 III. A mature female can lay 15000-2000 ova at a time
 IV. Oviduct and ureters open separately into the cloaca
 a) I and II b) II and III c) I and IV d) II and IV
383. Which of the following functions is/are performed by the of frog's skin?
 a) Excretion of waste material b) Absorption of minerals
 c) Diffusion of respiratory gases d) All of the above
384. Epidermis of the earthworm's body is made up of single layer known as
 a) Cuboidal epithelium b) Columnar epithelium
 c) Squamous epithelium d) Compound epithelium
385. Three chambered heart of the frog contain
 a) Two ventricle and one atria
 b) Two atria and one ventricle
 c) One auricle and two ventricle
 d) One auricle, one ventricle and one atrium
386. Haversian lamellae are the structures found in
 a) Hyaline cartilage b) Fibrous cartilage c) Bone marrow d) Myelin sheath
387. A pair of salivary gland in cockroach is present near the
 a) Crop b) Gizzard c) Mouth d) Antenna
388. Observe the following figure of female reproductive system of earthworm and identify A to D



- a) A-Urinary duct, B-Ova, C-Ovary, D-Cloaca, E-Urethra
 b) A-Oviduct, B-Ovary, C-Ova, D-Cloaca, E-Urinary bladder
 c) A-Oviduct, B-Ovary, C-Ova, D-Rectum, E-Adrenal gland
 d) A-Urinogenital duct, B-Ovary, C-Ovum, D-Coelom, E-Urethra
389. Blood vascular system of *Pheretima* consists of
 a) Vessels, capillaries and heart b) Nerve, veins and heart
 c) Lymphs, heart and blood d) Visceral organ, lymph and blood
390. Consider the following statement related to *Pheretima* and select the correct option stating, which ones are true and which are false?
 A. It exhibits closed type of blood vascular system
 B. It lacks of specialised breathing device
 C. Typhosole increases the effective area of absorption in intestine
 D. There are two pair of testes present in 10th and 11th segments

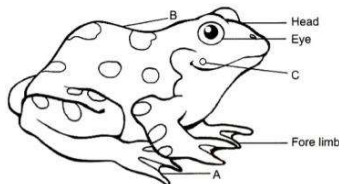
A B C D

a) T F T F b) F F T T c) T T T F d) T T T T

391. A group of similar cells which along with intercellular substances perform a specific function in multicellular organisms are called

a) Organs b) Cell system c) Tissues d) Categories body

392. Identify A to C in the given picture of frog



a) A-Trunk, B-Tympanum, C-Web
 b) A-Web, B-Tympanum, C-Trunk
 c) A-Web, B-Trunk, C-Tympanum
 d) A-Tympanum, B-Trunk, C-Web

393. Which of the following cells is/are contained in areolar connective tissue?

a) Mast cells b) Fibroblasts c) Macrophages d) All of these

394. Which of the following is common British frog?

a) *Rana catesbeiana* b) *Rana tigrina* c) *Rana temporaria* d) *Rana malabaricus*

395. The common species of frog found in India is

a) *Rana temporaria* b) *Rana catesbeiana* c) *Rana tigrina* d) *Rana mandelica*

396. Examples of specialised connective tissue is/are

a) Bone b) Cartilage c) Blood d) All of these

397. Pick out the incorrectly matched pair from the following

a) Sensory papillae – Touch b) Cloaca – Pass sperm and faecal matter
 c) Lymph – Contains RBC and proteins d) Buccal cavity – Respiratory organs

398. Which one of the following mammalian cells is not capable of metabolizing glucose to carbon dioxide aerobically?

a) White blood cells b) Unstriated muscle cells
 c) Liver cells d) Red blood cells

399. Which part of the gut in *Pheretima* act as a suction pump?

a) Pharynx b) Oesophagus c) Gizzard d) Typhosole

400. Irregular nuclei is present in

a) Neutrophils b) basophils c) Eosinophils d) Monocytes

401. Frog has different types of sense organs

I. Sensory papillae
 II. Nasal epithelium
 III. Taste buds
 IV. Eyes
 V. Tympanum with internal ears

Which of these are well organised structures?

a) I and III b) III and IV c) IV and V d) I, II, III and IV

402. Cockroach is

a) Uriotelic b) Uricotelic c) Ammonotelic d) Ureo-ammonotelic

403. Segregate the given set of statements regarding frog into true and false category

I. Frogs do not have a lymphatic system
 II. Frogs are ammonotelic animals
 III. Hindlimbs of frog ends in five digits and forelimbs ends in four digits
 IV. Female frog contains sound producing vocal sacs which are absent in male frog

a) T, F, T, T b) F, F, F, T c) T, F, T, F d) F, F, T, F

404. Supra-oesopharyngeal ganglion in cockroach supplies the nerves to
 a) Antennae b) Compound eyes c) Maxillary palps d) Both (a) and (b)
405. Male frog can be distinguished from female frog due to the presence of
 a) Vocal sacs and copulatory pad on the first digit of the forelimb
 b) A neck and tail is absent
 c) The hind limb ends in the five digits
 d) Eyes are bulged and are covered by the nictitating membrane
406. In the mouth parts of cockroach, the glea and lacinia forms the part of
 a) Mandible b) Maxilla c) Labium d) Labsum
407. Consider the given statements about *Periplanata* and select the correct option
 A. Blood vascular system is of open type
 B. Malpighian tubules helps in the removal of excretory products from the haemolymph
 C. They bear no eyes
 D. Female bear mushroom glands and male bear collateral glands
 A B C D
 a) T F T F b) T T F F c) F F T T d) F T T T
408. Major protein of connective tissue is
 a) Melanin b) Collagen c) Keratin d) Myosin
409. Which of the following segment contains the cerebral ganglion in the earthworm?
 a) 7 b) 5 c) 6 d) 3
410. The cells which stores the nitrogenous waste in cockroaches are known as
 a) Urate cells b) Trophocytes c) Ammonate cells d) None of these
411. In female cockroach, which of the following part is absent?
 a) Anal style b) Anal cerca c) Stema d) Tergum
412. 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
413. Which one of the following is the correct pairing of a body part and the kind of muscle tissue that moves it?
 a) Heart wall- Involuntary unstriated muscle b) Biceps of upper arm – Smooth muscle fibres
 c) Abdominal wall – Smooth muscle d) Iris –Involuntary smooth muscle
414. The head of the cockroach show great mobility in all the directions due to
 a) Flexible neck b) Absence of neck c) Small size of head d) None of these
415. The skin of frog acts as ...A... in water and on land, the ...B..., ...C... and ...D... acts as respiratory organs.
 Choose the correct combination in accordance to above statement
 a) A-Respiratory organ, B-Buccal cavity, C-Skin, D-Lungs
 b) A-Digestive organ, B-Pharynx, C-Mouth, D-Heart
 c) A-Purifier, B-Heart, C-Lungs, D-Blood
 d) A-Excretory organ, B-Skin, C-Pharynx, D-lungs
416. Heart of the cockroach is
 a) 12 chambered b) 13 chambered c) 15 chambered d) 4 chambered
417. The layer of cells forming tissue that appears to be multilayered but actually some of the cells extend from the basement membrane to the surface is
 a) Simple columnar epithelium b) Pseudostratified epithelium
 c) Stratified columnar epithelium d) Stratified cuboidal epithelium
418. How many pairs of testes are present in earthworm?
 a) Five b) Two c) Three d) Four