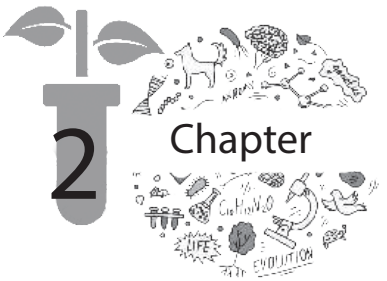


Chapter 2

Structural Organisation in Animals

MULTIPLE CHOICE QUESTIONS

Topic 1 Epithelial Tissues

1. Select the incorrect statement.
(a) Multicellular glandular epithelium is formed of clusters of cells.
(b) Compound epithelium is actively involved in secretion and absorption of substances.
(c) Pancreatic and salivary ducts are internally lined by compound of epithelium.
(d) None of these

2. Cell junctions
(a) Are formed in epithelial tissues
(b) Provide structural and functional link between adjacent cells of tissues
(c) Are alternatively called gap junctions

Select the most appropriate option.
(a) a, b, c are correct
(b) Only a is correct
(c) b and c are correct
(d) a and b are correct

3. Match the following cell structure with its characteristic feature:

	Column-I		Column-II
A	Tight junctions	(1)	Cement neighbouring cells together to form sheet
B	Adhering junctions	(2)	Transmit information through chemical to another cells
C	Gap junctions	(3)	Establish a barrier to prevent leakage of fluid across epithelial cells
D	Synaptic junctions	(4)	Cytoplasmic channels to facilitate communications between adjacent cells

Select the most appropriate option.

	A	B	C	D
(a)	4	3	1	2
(b)	2	4	1	3
(c)	4	2	1	3
(d)	3	1	4	2

4. The function of the gap junction is to
(a) stop substance from leaking across a tissue.
(b) perform cementing to keep neighbouring cells together.
(c) facilitate communication between adjoining cells by connecting the cytoplasm for rapid transfer of ions, small molecules and some large molecules.
(d) separate two cells from each other.

5. Assertion: Squamous epithelium helps in the diffusion of gases in lungs.
Reason: Squamous epithelium bears microvilli.
(a) Both assertion and reason are true, assertion is incorrect explanation of assertion
(b) Both assertion and reason are true, reason is not the correct explanation of assertion
(c) Assertion is true, reason is false
(d) Both assertion and reason are false

6. Assertion: Compound epithelium is composed of two or more layers of cells.
Reason: Compound epithelium has protective functions.
(a) Both assertion and reason are true, assertion is incorrect explanation of assertion
(b) Both assertion and reason are true, reason is not the correct explanation of assertion
(c) Assertion is true, reason is false
(d) Both assertion and reason are false

7. Consider the following statements:
(A) A tissue is composed of similar cells which perform specific functions.
(B) Epithelial tissues are characterized by a free surface toward body fluid or outside environment.
Select the correct option.
(a) A is true, B is false
(b) Both A and B are true
(c) A is false, B is true
(d) Both A and B are false

8. Simple epithelium consists of
(a) large intercellular spaces
(b) single layer of cells
(c) flat cells without nucleus
(d) all of these

9. Human skin is composed of
(a) compound epithelium
(b) squamous epithelium
(c) columnar epithelium
(d) ciliated epithelium

10. Match the following columns.

	Column-I		**Column-II**
A	Squamous epithelium	(1)	Stomach and intestine
B	Cuboidal epithelium	(2)	Lungs and blood vessels
C	Columnar epithelium	(3)	Tubular parts of nephrons

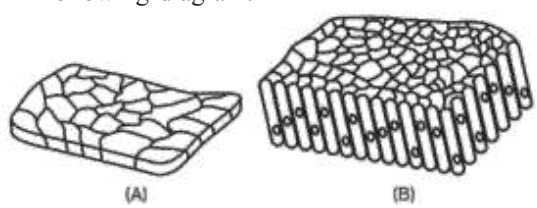
Select the correct option

	A	B	C
(a)	3	1	2
(b)	1	2	3
(c)	2	3	1
(d)	3	2	1

11. The inner walls of large blood vessels are formed by
(a) pseudostratified epithelium
(b) squamous epithelium
(c) ciliated epithelium
(d) columnar epithelium

12. What is the similarity between cuboidal epithelium and columnar epithelium?
(a) They are composed of two layers of cells.
(b) They are composed of phagocytic cells.
(c) They perform the functions of secretion and absorption.
(d) All of these

13. Identify the tissues A and B shown in the following diagram:



Select the correct option

	A	**B**
(a)	Squamous epithelium	Columnar epithelium
(b)	Cuboidal epithelium	Squamous epithelium
(c)	Columnar epithelium	Cuboidal epithelium
(d)	Compound epithelium	Pseudostratified

14. Efficient gaseous exchange in the air sacs of the lungs occur due to the presence of
(a) numerous microvilli
(b) ciliated epithelium
(c) flat cells
(d) columnar epithelium

15. The inner surface of hollow organs are lined by
(a) columnar epithelium
(b) compound epithelium
(c) squamous epithelium
(d) ciliated epithelium

16. The ciliated epithelial cells are required to move particles or mucus in a specific direction. In humans, these cells are mainly present in
(a) fallopian tubes and pancreatic duct
(b) Eustachian tube and salivary duct
(c) bronchioles and fallopian tubes
(d) bile duct and bronchioles

17. Match the following columns.

	Column-I		**Column-II**
A	Goblet cells	(1)	Multicellular glandular epithelium
B	Salivary glands	(2)	Unicellular glandular epithelium
C	Buccal cavity	(3)	Compound epithelium
D	PCT	(4)	Cuboidal epithelium

Select the most appropriate option.

	A	B	C	D
(a)	2	1	3	4
(b)	3	2	4	1
(c)	4	3	1	2
(d)	1	4	2	3

18. All the listed glands pour their secretions into ducts except
(a) salivary gland
(b) digestive glands
(c) pineal gland
(d) mammary glands

Topic 2 Connective Tissues

19. The intercellular material of cartilage is
(a) solid and pliable
(b) solid and non-pliable
(c) hollow and soft
(d) hollow and jelly-like

20. Select the incorrect statement:
(a) Most of cartilage in vertebrate embryo gets replaced by bones in adults.
(b) Chondrocytes are cartilage cells which are found in between collagen fibres.
(c) Cartilage form the human nose except its tips.
(d) Bones of vertebral column are composed of cartilage.

21. Bones are hard and non-pliable due to the presence of
(a) calcium salts (b) elastin fibres
(c) chondrocytes (d) all of these

22. The spaces in which osteocytes are present are called
(a) osteoclast (b) sinuses
(c) lacunae (d) canaliculi

23. The fluid connective tissue contains all of the following cells, except
(a) platelets (b) fibroblasts
(c) WBCs (d) RBCs

24. Match the following columns:

	Column-I		**Column-II**
A	Adipose tissue	(1)	Blood
B	Hyaline cartilage	(2)	Macrophages and mast cells
C	Fluid connective tissue	(3)	Fat storage
D	Areolar tissue	(4)	None

Select the correct option

	A	B	C	D
(a)	4	3	2	1
(b)	2	4	1	3
(c)	1	2	3	4
(d)	3	4	1	2

25. Select the incorrect statement regarding connective tissues:
(a) It helps to connect and support other tissues of the body.
(b) Blood is a fluid connective tissue.

(c) It is composed of structural protein fibres, viz. collagen or elastin.
(d) Their ground substance is composed of polypeptides and its derivatives.

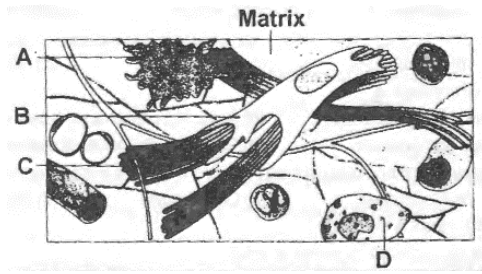
26. Areolar tissue is a type of
(a) loose connective tissue
(b) compound epithelium
(c) dense connective tissue
(d) specialized connective tissue

27. Areolar tissues contain
(a) T-lymphocytes tissue and B-lymphocytes
(b) fibroblast, macrophages, mast cells
(c) fibroblast cells only
(d) fibroblasts and fat globules

28. Fat-storing adipose tissue is
(a) loose connective tissue
(b) dense regular connective tissue
(c) dense irregular connective tissue
(d) specialized connective tissue

29. Consider the following statements:
(a) In dense connective tissues, fibroblasts are compactly packed.
(b) In dense regular connective tissues, collagen fibers are arranged in parallel rows.
Select the correct option
(a) a is true, b is false
(b) a is false, b is true
(c) Both a and b are false
(d) Both a and b are true

30. In the below diagram of areolar connective tissue, the different cells and parts have been indicated by alphabets. Choose the answer in which these alphabets correctly match with the parts and cells they indicate –



	A	B	C	D
(a)	Adipocyte	Collagen fibres	Microfilament	Mast cells
(b)	Macrophage	Collagen fibres	Microfilament	Mast cells
(c)	Macrophage	Collagen fibres	Microtubule	RBC
(d)	Macrophage	Fibroblast	Collagen fibres	Mast cells

31. Ligaments contain
(a) loose bundles of fibres
(b) large fat storage areas
(c) parallely arranged collagen fibres
(d) irregularly placed elastin fibres

32. Match the following columns:

	Column-I		**Column-II**
A	Skin	(1)	Loose connective tissue
B	Tendon	(2)	Specialized connective tissue
C	Adipose tissue	(3)	Dense regular connective Tissue
D	Cartilage	(4)	Dense irregular connective tissue

Select the correct option

	A	B	C	D
(a)	3	1	2	4
(b)	4	3	1	2
(c)	2	4	3	1
(d)	1	2	4	3

Topic 3 Muscle Tissue and Neural Tissue

33. Myofibrils are
(a) contracted muscle fibres
(b) structural components of all muscle fibres
(c) striated muscle fibres
(d) skeletal muscle fibres

34. Skeletal muscles are
(a) striated in appearance
(b) smooth in appearance
(c) involuntary muscles
(d) both A and C

35. Study the following figures.

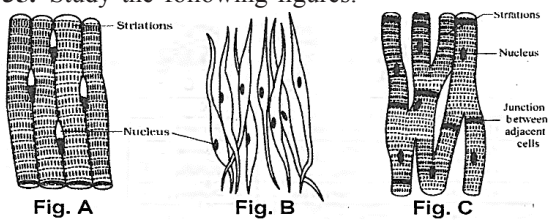


Fig. A Fig. B Fig. C

Identify these muscles (A, B and C).

	A	B	C
(a)	Smooth muscles	Striated muscles	Cardiac muscles
(b)	Cardiac muscles	Smooth muscles	Striated muscles
(c)	Striated muscles	Smooth muscles	Cardiac muscles
(d)	Involuntary muscles	Voluntary muscle	Heart muscle

36. Involuntary muscle fibers in human body are found in
(a) heart (b) blood vessels
(c) intestine (d) all of these

37. Consider the following statements:
(a) All involuntary muscles are smooth in appearance.
(b) All striated muscles are voluntary muscles.
Select the correct option
(a) (a) is true, (b) is false
(b) Both a) and (b) are true
(c) (a) is False, (b) is true
(d) Both (a) and (b) are false

38. Which type of tissue correctly matches with its locations?

	Tissue	Location
(a)	Areolar tissue	Tendons
(b)	Transitional epithelium	Tip of nose
(c)	Cuboidal epithelium	Lining of stomach
(d)	Smooth muscle	Wall of intestine

39. The muscular layer lining the stomach and intestine is
(a) striated in appearance
(b) smooth in appearance
(c) multinucleated
(d) characterized by intercalated discs

40. Heart cells have the ability to contract as a unit due to the presence of
(a) multinucleate condition
(b) fusiform shape
(c) intercalated discs
(d) striations

41. The structural and functional unit of nervous system is
(a) neuron (b) neuroglia
(c) oligodendrocyte (d) ganglia

42. The neurons in the neural system are protected by
(a) dendrites (b) neuroglial cells
(c) axons (d) Nissl's granules

43. Assertion: Both skeletal muscles and cardiac muscles are striated appearance.
Reason: Cardiac muscles are involuntary in nature.
(a) Both assertion and reason are true, assertion is incorrect explanation of assertion
(b) Both assertion and reason are true, reason is not the correct explanation of assertion

(c) Assertion is true, reason is false
(d) Both assertion and reason are false

44. Assertion: Neurons are excitable cells.
Reason: Neurons are found abundantly throughout the body.
(a) Both assertion and reason are true, assertion is incorrect explanation of assertion
(b) Both assertion and reason are true, reason is not the correct explanation of assertion
(c) Assertion is true, reason is false
(d) Both assertion and reason are false

Topic 4 Cockroach

45. Identify A to E.

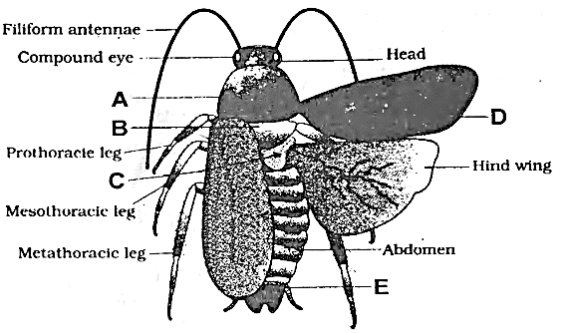


Figure — External features of cockroach

	A	B	C	D	E
(a)	Pronotum	Mesothorax	Metathorax	Tegmina	Pleura
(b)	Pronotum	Mesothorax	Metathorax	Tegmina	Sterna
(c)	Pronotum	Mesothorax	Metathorax	Tegmina	Analcerci
(d)	Pronotum	Mesothorax	Metathorax	Tegmina	Anal style

46. The body of cockroach can be morphologically distincted as
(a) head and abdomen
(b) head, thorax and abdomen
(c) head, abdomen and tail
(d) head and trunk

47. Consider the following statements:
(A) Body of cockroach is covered by hard exoskeleton made up of chitin.
(B) In male cockroach, the wings extend beyond the abdomen.
Select the correct option
(a) A is true, B is false
(b) Both A and B are false
(c) A is false, B is true
(d) Both A and B are true

48. The chitinous exoskeleton of arthropods is formed by the polymerization of
(a) lipoglycans
(b) keratin sulphate and chondroitin sulphate
(c) D – glucosamine
(d) N – acetyl glucosamine

49. Hardened plates of exoskeleton in cockroaches are known as
(a) capsids (b) spicules
(c) sclerites (d) metamere

50. Dorsal and ventral sclerites in cockroach are
(a) tergites and sternites, respectively
(b) sternites and pleurites, respectively
(c) pleurites and tergites, respectively
(d) pleurites and sternites, respectively

51. The triangular head of cockroach
(1) bear compound eyes
(2) is formed by the fusion of two segments
(3) bear chewing and lapping mouthparts
Select the correct option:
(a) 1, 2, 3 are correct
(b) Only 1 is correct
(c) 2 and 3 are correct
(d) 1 and 2 are correct

52. The mouth parts of cockroach contain
(a) two mandibles, two maxillae, labrum, labium and hypopharynx
(b) two mandibles and maxillae each, two labrum and labium each
(c) one mandible and maxilla each, labarum and hypopharynx
(d) one mandible, labrum, labium and hypopharynx

53. Select the incorrect statement regarding cockroach:
(a) Hypopharynx acts as a tongue.

(b) Head is mobile in all directions due to flexible neck.
(c) Antennae possess sensory receptors to monitor the environment.
(d) Thorax is greatly reduced and non-divisible.

54. Paired walking legs in cockroaches are found on
(a) each thoracic segments
(b) mesothorax and metathorax
(c) prothorax and metathorax
(d) metathorax only

55. Forewings and hindwings in cockroaches arises from
(a) mesothorax and metathorax
(b) prothorax
(c) metathorax
(d) prothorax and metathorax

56. Match the following columns.

	Column-I		**Column-II**
A	Sclerite	(1)	Forewings
B	Tegmina	(2)	Simple eye
C	Ocellus	(3)	Exoskeleton plate

Select the correct option:

	A	B	C
(a)	3	2	1
(b)	2	1	3
(c)	3	1	2
(d)	2	3	1

57. How the forewings of cockroaches are distinguished from the hindwings?
(a) Forewings are leathery while hind @ wings are membranous.
(b) Forewings are much longer while hind @ wings are vestigial.
(c) Forewings are much reduced and hind @ wings are highly evolved.
(d) Forewings are transparent while hind @ wings are opaque.

58. In female cockroach
(a) forewings help in flight
(b) abdomen consists of 8 segments
(c) seventh sternum is boat shaped
(d) all of these

59. Which of the following sterna form the brood pouch in female cockroach?
(a) 8th, 9th (b) 7th, 8th, 9th
(c) 6th, 7th, 8th (d) 8th, 9th, 10th

60. Which of the following features is used to identify a male cockroach from a female cockroach?
(a) Presence of a boat shaped sternum on the 9th abdominal segment
(b) Presence of caudal styles
(c) Forewings with darker tegmina
(d) Presence of anal cerci

61. Select the incorrect statement:
(a) Genital pouch in male cockroach is dorsally bounded by 9th and 10th terga.
(b) Male genital pouch contains genital pore only.
(c) 10th segment in male and female cockroach possess anal cerci.
(d) Female genital pouch contains collateral glands.

62. Which among the following structures are found in male cockroaches only?
(a) Collateral glands and anal cerci
(b) Anal cerci and spermathecal pores
(c) Spermathecal pores and collateral glands
(d) Gonapophysis and anal styles

63. Match the following columns:

	Column-I		**Column-II**
A	Anal cerci	(1)	7^{th} in females
B	Boat-shaped sternum	(2)	9^{th} segment in males
C	Anal styles	(3)	10^{th} segment
D	Genital pouch	(4)	Bounded by 9th and 10th terga

Select the correct option:

	A	B	C	D
(a)	4	2	1	3
(b)	2	3	4	1
(c)	1	4	3	2
(d)	3	1	2	4

64. What is the correct arrangement of structures in Cockroach's alimentary canal?
(a) Oesophagus, Gizzard, Crop
(b) Gizzard, Oesophagus, Crop
(c) Crop, Oesophagus, Gizzard
(d) Oesophagus, Crop, Gizzard

65. Match the following.

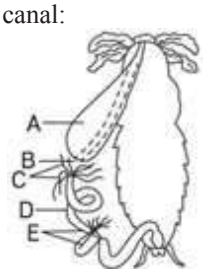
	Column-I		**Column-II**
A	Proventriculus	(1)	Food storage
B	Crop	(2)	Grinding food particles
C	Hepatic caeca	(3)	Secretion of digestive juices
D	Malpighian tubules	(4)	Removal of excretory products

Select the correct option:

	A	B	C	D
(a)	4	3	2	1
(b)	2	1	3	4
(c)	2	4	1	3
(d)	3	2	4	1

66. How many chitinous teeth are present in the gizzard of cockroach?
(a) Two (b) Six
(c) Ten (d) Fourteen

67. Refer to the given diagram of cockroach's alimentary canal:



Which of the following options represent correct name and characteristic of labelled structures?
(a) A – Gizzard – Food grinding structure
(b) C – Hepatic ceca – Secretary digestive juices
(c) D – Ileum – Food absorption
(d) E – Malpighian tubules – 6–8 blind tubules

68. Select the correct sequence of organs in the alimentary canal of cockroach starting from mouth.
(a) Pharynx → Oesophagus → Gizzard → Crop → Ileum → Rectum
(b) Pharnyx → Oesophagus → Gizzard → Ileum → Crop → Colon → Rectum
(c) Pharnyx → Oesophagus → Ileum → Crop → Gizzard → Colon → Rectum
(d) Pharnyx → Oesophagus → Crop → Gizzard → Ileum → Colon → Rectum

69. During anatomical studies of cockroach, how would you differentiate malpighian tubules (A) from gastric caeca (B)?
(a) A – 6–8 in number, B – 200–300 in number
(b) A – Present at the junction of midgut and hindgut B – Present at the junction of foregut and midgut
(c) A – Blind, black-coloured tubules B – Hollow, yellow-coloured tubules
(d) All of these

70. Select the incorrect statement regarding cockroach:
(a) Cockroach possess open circulatory system.
(b) Blood vessels are highly developed and open into heart.
(c) Visceral organs found in hemocoel are bathed in hemolymph.
(d) Alary muscles associated with heart are contractile muscles.

71. The heart of cockroach possess
(a) 10 chambers (b) 8 chambers
(c) 13 chambers (d) 12 chambers

72. Match the following columns.

	Column-I (Structures in cockroach)		Column-II (Number)
A	Spiracles	(1)	6–8
B	Heart chambers	(2)	100–150
C	Hepatic ceca	(3)	13
D	Malpighian tubule	(4)	10

Select the correct option :

	A	B	C	D
(a)	2	4	3	1
(b)	3	2	4	1
(c)	1	4	2	3
(d)	4	3	1	2

73. Select the incorrect statement regarding cockroach
(a) Exchange of gases occurs by diffusion at the tracheoles.
(b) Malpighian tubules remain lined by glandular and ciliated cells.
(c) Uricose glands are principal reproductive glands in female cockroach
(d) Fat bodies and nephrocytes help in excretion of nitrogenous waste

74. The principal nitrogenous waste in cockroach is
(a) ammonia (b) vasa
(c) guanine (d) uric acid

75. The body cells in cockroach discharge their nitrogenous waste in the hemolymph mainly in the form of
(a) calcium carbonate
(b) ammonia
(c) potassium urate
(d) urea

76. How many ganglia are found in the thorax and abdomen of male cockroach?
(a) 3 and 6 (b) 6 and 4
(c) 5 and 5 (d) 6 and 3

77. Consider the following statements:
(a) Cockroaches remain alive for several hours even after its head is cut off.
(b) Nervous system of cockroach is dorsally placed along the whole body.

Select the correct option:
(a) A is true, B is false
(b) Both A and B are true
(c) A is false, B is true
(d) Both A and B are false

78. Which of the following statements is incorrect?
(a) Female cockroach possesses sixteen ovarioles in the ovaries.
(b) Cockroaches exhibit mosaic vision with less sensitivity and more resolution.
(c) A mushroom-shaped gland is present in the 6th-7th abdominal of male cockroach.
(d) A pair of spermatheca is present in the 6th segment of female cockroach.

79. Match the following columns

	Column-I		Column-II
A	Testes	(1)	2nd –6th segment
B	Ovaries	(2)	4th –6th segment
C	Spermatheca	(3)	6th segment
D	Mushroom glands	(4)	6th–7th segment

Select the correct option:

	A	B	C	D
(a)	3	2	4	1
(b)	2	1	3	4
(c)	4	3	1	2
(d)	1	4	2	3

80. The bundles of sperms are called
(a) phallomere (b) gonapophysis
(c) spermathecal (d) spermatophores

81. Phallomere in cockroaches
(a) helps to store spermatophores
(b) is chitinous external genitalia
(c) is accessory reproductive gland

(d) represents ejaculatory duct

82. Ovarioles are
(a) bundles of ova
(b) ovarian tubules
(c) immature ovaries
(d) capsule containing fertilized ova

83. Match the following columns.

	Column-I		Column-II
A	Ovarioles	(1)	Opening of ejaculatory duct
B	Gonopore	(2)	Chain of developing ova
C	Phallomere	(3)	Bundles of sperms
D	Spermatophore	(4)	External genitalia

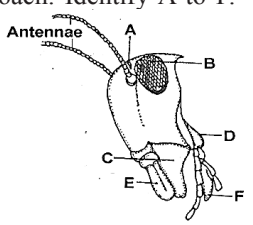
Select the correct option

	A	B	C	D
(a)	3	2	1	4
(b)	4	3	2	1
(c)	1	4	3	2
(d)	2	1	4	3

84. Which of the following structure encase the fertilized eggs of cockroaches?
(a) Spermatheca (b) Ovariole
(c) Cocoon (d) Ootheca

85. Select the incorrect statement.
(a) Female cockroaches produce one ootheca at a time.
(b) The nymphs of cockroach resemble adults.
(c) The nymphs of cockroach moults about 13 times to reach adult form.
(d) Only adult cockroaches have wings.

86. The following figure is related to head region of cockroach. Identify A to F.



	A	B	C	D	E	F
(a)	Compound eye	Ocellus	Maxilla	Mandible	Labrum	Labium
(b)	Ocellus	Compound eye	Mandible	Maxilla	Labrum	Labium
(c)	Ocellus	Compound eye	Mandible	Maxilla	Labium	Labrum
(d)	Ocellus	Compound eye	Maxilla	Mandible	Labium	Labrum

87. Match the following columns.

	Column-I		**Column-II**
A	Collateral gland	(1)	Stimulatory organ in male
B	Titillator	(2)	Anal appendage which helps in oviposition
C	Gonapophysis	(3)	Helps in the formation of egg cases

Select the correct option:

	A	B	C
(a)	2	3	1
(b)	1	2	3
(c)	3	1	2
(d)	2	1	3

88.

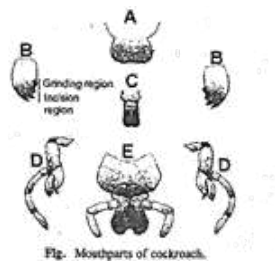
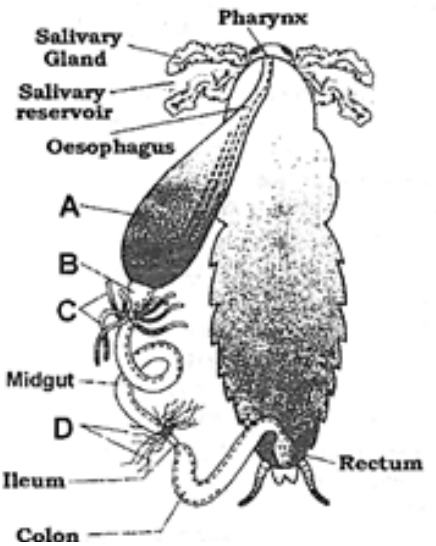


Fig. Mouthparts of cockroach.

The above figure is related with mouth parts of cockroach. Identify A to E -

	A	B	C	D	E
(a)	Maxilla	Hypop harynx	Labium	Mandible	Labrum
(b)	Mandible	Labium	Maxilla	Labrum	Hypopharynx
(c)	Labrum	Mandible	Hypopharynx	Maxilla	Labium
(d)	Labium	Hypopharynx	Labrum	Maxilla	Mandible

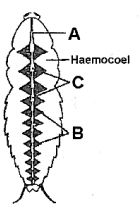
89.



Identify structures A to D –

	A	B	C	D
(a)	Gizzard	Crop	Hepatic caecae	Malpighian tubules
(b)	Crop	Gizzard	Hepatic caecae	Labrum
(c)	Crop	Gizzard	Malpighian tubules	Hepatic caecae
(d)	Gizzard	Crop	Malpighian tubules	Hepatic caecae

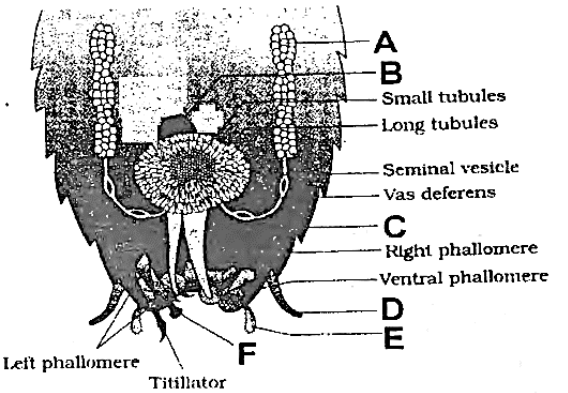
90.



The above figure shows open circulatory system of cockroach. Identify A, B and C.

	A	B	C
(a)	Posterior aorta	Alary muscles	Chambers of heart
(b)	Anterior aorta	Ciliary muscles	Chambers of heart
(c)	Anterior aorta	Alary muscles	Chambers of heart
(d)	Anterior aorta	Ciliary muscles	Chambers of heart

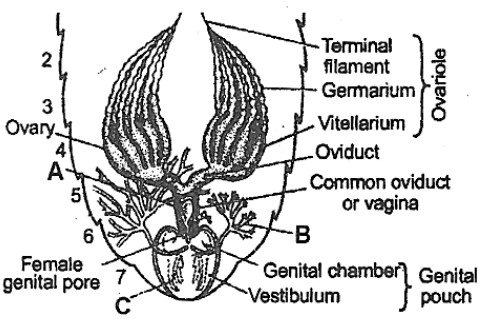
91.



Identify A to F in above diagram –

	a	b	c	d
A	Testis	Testis	Testis	Testis
B	Collaterial gland	Collaterial gland	Phallic gland	Phallic gland
C	Ejaculatory duct	Ejaculatory duct	Ejaculatory duct	Ejaculatory duct
D	Anal cercus	Terga	Anal cerci	Caudal style
E	Caudal style	Caudal style	Caudal style	Caudal style
F	Pseudopenis	Pseudopenis	Pseudopenis	Pseudopenis

92. Figure refers to reproductive system of female cockroach. The correct labellings indicated by alphabets are respectively-

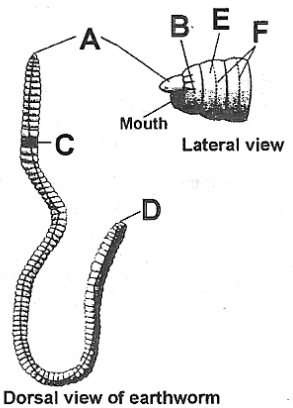


	A	B	C
(a)	Spermatheca	Collaterial glands	Gonapophyses
(b)	Phallic gland	Collaterial glands	Gonapophyses

(c)	Spermatheca	Seminal vesicles	Gonapophyses
(d)	Spermatheca	Collaterial glands	Tegmina

Topic 5 Earthworm and Frog

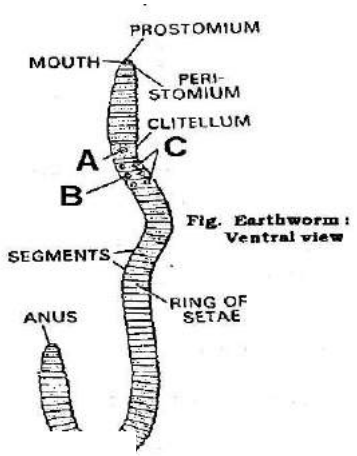
93.



Go through the above figure. Identify A to F.

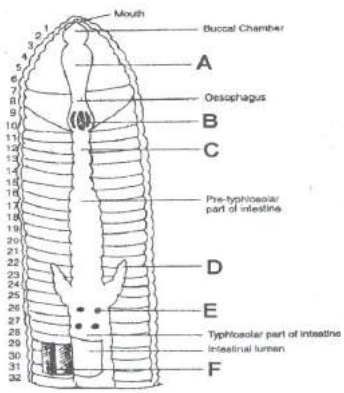
	a	b	c	d
A	Peristomium	Prostomium	Prostomium	Prostomium
B	Prostomium	Peristomium	Peristomium	Peristomium
C	Clitellum	Clitellum	Endosteum	Endosteum
D	Anus	Anus	Anus	Cloaca
E	Metameres	Metameres	Metameres	Metameres
F	Ring of setae	Ring of setae	Ring of setae	Ring of setae

94.



	A	B	C
(a)	Excretory pore	Female genital pore	Male genital pore
(b)	Male genital pore	Female genital pore	Genital papilla
(c)	Female genital pore	Genital papilla	Male genital pore
(d)	Female genital pore	Male genital pore	Genital papilla

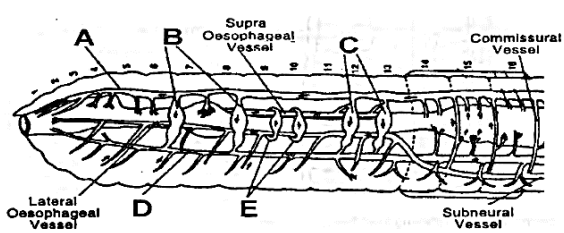
95.



Choose the correct option of labeling from the options given-

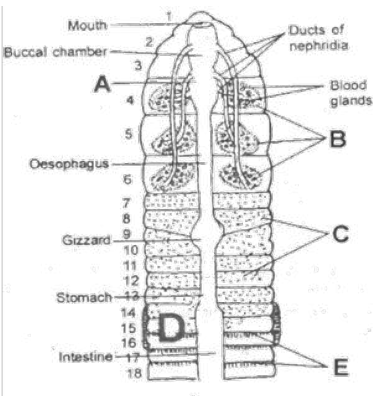
	a	b	c	d
A	Pharynx	Gizzard	Pharynx	Pharynx
B	Stomach	Pharynx	Gizzard	Gizzard
C	Gizzard	Stomach	Stomach	Stomach
D	Caecae	Caecae	Caecae	Liver
E	Lymph gland	Lymph gland	Lymph gland	Villi
F	Typhlos ole	Typhlosole	Typhlosole	Typhlosole

96. Go through the blood vascular system of earthworm given in the following diagram -



	a	b	c	d
A	Dorsal vessel	Ventral vessel	Dorsal vessel	Ventral vessel
B	Lateral hearts	Lateral hearts	Lateral hearts	Lateral hearts
C	Lateraloeso-phageal heart	Lateraloesopha-geal heart	Anterior loop	Anterior loop
D	Ventral vessel	Dorsal vessel	Ventral vessel	Dorsal vessel
E	Anterior loop	Anterior loop	Lateraloeso-pharyngeal heart	Lateraloeso-pharyngeal heart

97.

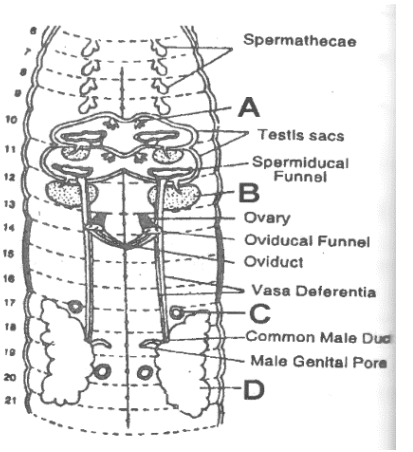


I. Septal nephridia
II. Pharynx
III. Forest of integumentary nephridia
IV. lntegumentary nephridia
V. Tufts of pharyngeal nephridia

Identify the structures labeled A to E in the diagram given above from the list I to V -

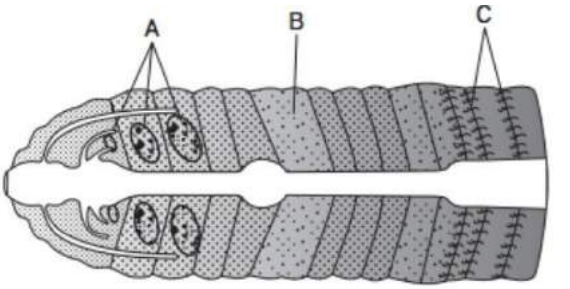
	A	B	C	D	E
(a)	II	I	III	IV	V
(b)	II	V	IV	III	I
(c)	II	IV	V	I	III
(d)	II	III	IV	I	V

98. Identify A to D in the figure –



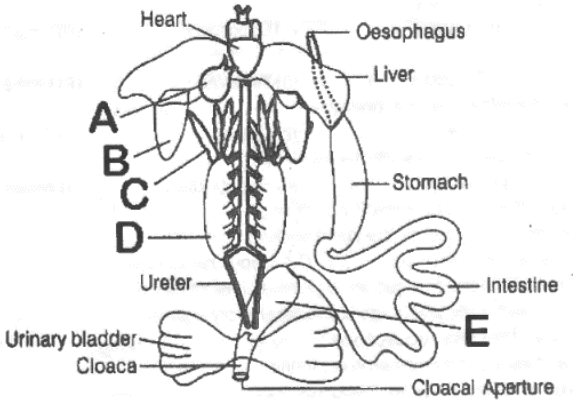
	a	b	c	d
A)	Testis	Seminal vesicle	Accessory gland	Prostate gland
B)	Seminal vesicle	Testis	Accessory gland	Prostate gland
C)	Testis	Seminal vesicle	Prostate gland	Accessory gland
D)	Seminal vesicle	Testis	Prostate gland	Accessory gland

99. Refer to the diagram of nephridial system in earthworm.



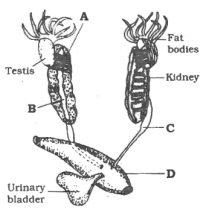
Select the option representing correct characteristic of the labelled structure:
(a) C – Septal nephridia – Open into intestine
(b) A – Pharyngeal nephridia – Open to outside
(c) B – Integumentary nephridia – Densely found on first two segments
(d) All of these

100. The below figure is associated with diagrammatic representation of internal organs of frog. Identify A to E.



	a	b	c	d
A	Gall bladder	Gall bladder	Gall bladder	Gall bladder
B	Lung	Lung	Lung	Lung
C	Ovary	Fat bodies	Testis	Fat bodies
D	Testis	Testis	Kidney	Kidney
E	Rectum	Rectum	Rectum	Rectum

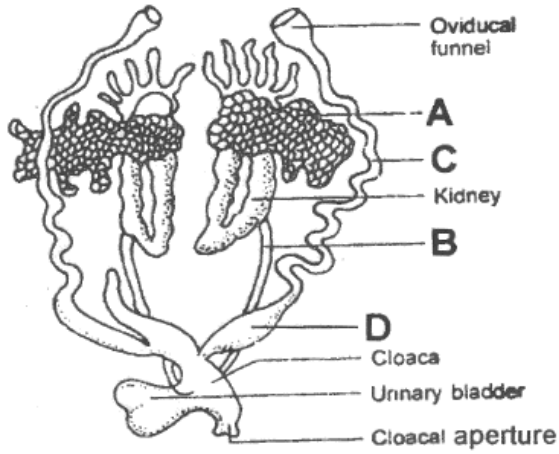
101.



Study the following figure indicating the male reproductive system of frog. Identify A to D

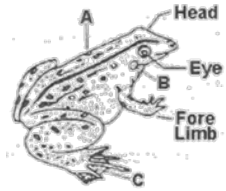
	a	b	c	d
A.	Bidder's canal	Adrenal gland	Urinogenital duct	Rectum
B.	Bidder's canal	Adrenal gland	Urinogenital duct	Cloaca
C.	Vasa efferentia	Adrenal gland	Urinogenital duct	Cloaca
D.	Vasa efferentia	Thyroid gland	Urinogenital duct	Cloaca

102. The below figure is related with female reproductive system of frog. Identify A to D.



	a	b	c	d
a)	Ovary	Ureter	Oviduct	Ovisac
b)	Ovary	Urinogenital duct	Bidder's canal	Ovisac
c)	Ovary	Urinogenital duct	Ovisac	Fat bodies
d)	Ovary	Urinogenital duct	Bidder's canal	Oviduct

103. Identify A, B and C respectively –



(a) Trunk, Tympanum, Web
(b) Neck, Brown eye spot, Web
(c) Trunk, Tympanum, Hind limb
(d) Neck, Tympanum, Hind limb

ANSWER KEY

1. (c)	2. (a)	3. (d)	4. (c)	5. (c)	6. (b)	7. (b)	8. (b)	9. (a)	10. (c)
11. (b)	12. (c)	13. (a)	14. (c)	15. (d)	16. (c)	17. (a)	18. (c)	19. (a)	20. (c)
21. (a)	22. (c)	23. (b)	24. (d)	25. (d)	26. (a)	27. (b)	28. (a)	29. (d)	30. (d)
31. (c)	32. (b)	33. (b)	34. (a)	35. (c)	36. (d)	37. (b)	38. (d)	39. (b)	40. (c)
41. (a)	42. (b)	43. (b)	44. (b)	45. (c)	46. (b)	47. (d)	48. (d)	49. (c)	50. (a)
51. (b)	52. (a)	53. (d)	54. (a)	55. (a)	56. (c)	57. (a)	58. (c)	59. (b)	60. (b)
61. (b)	62. (d)	63. (d)	64. (d)	65. (b)	66. (b)	67. (b)	68. (d)	69. (b)	70. (b)
71. (c)	72. (d)	73. (c)	74. (d)	75. (c)	76. (a)	77. (a)	78. (a)	79. (b)	80. (d)
81. (b)	82. (a)	83. (d)	84. (d)	85. (a)	86. (b)	87. (c)	88. (c)	89. (b)	90. (c)
91. (c)	92. (a)	93. (b)	94. (c)	95. (c)	96. (a)	97. (b)	98. (a)	99. (d)	100. (d)
101. (a)	102. (a)	103. (a)							