

QB365

Important Questions - Structural Organisation in Animals

11th Standard CBSE

Biology

Reg.No. :

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Time : 01:00:00 Hrs

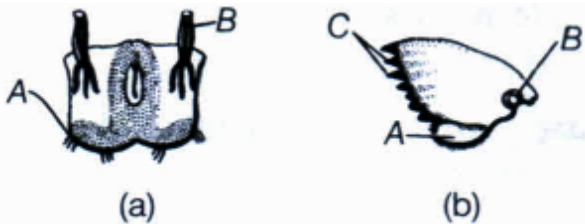
Total Marks : 50

Section-A

- 1) Name the type of fibres present in areolar tissues 1
- 2) Name the type of young and mature cartilage cells 1
- 3) What is the property of glandular epithelium ? 1
- 4) Write the origin and function of epithelial tissues 1
- 5) Which epithelium forms the epidermis of the skin land vertebrates? 1
- 6) Which tissu forms the ligaments ? what is their function ? 1
- 7) Name the cartilage present in pubic symphysis which helps in childbirth 1
- 8) Name of the layers of the dermis of frog. 1
- 9) What is the number of chamber spresent in the haert of frog? 1
- 10) In earthworm, from which segment intestine starts and where it ends? 1

Section-B

- 11) What is the yellow bone marrow ? what is its function and loction? 2
- 12) What is the shape of tadpole of frog? Name the hormone that helps in its metamorphosis. 2
- 13) Write the location of neuroglia cells. List their functions. 2
- 14) Where is the Bidder's canal located and how is it useful in frog? 2
- 15) Mention the speical features of eye in cockroach. 2
- 16) Earthworms are bisexual, still the self-fertilisation is not posiible in them.Explain 2
- 17) Distinguish between simple gland and compound gland 2
- 18) Distinguish between dense regular and dense irregular connective tissue 2
- 19) Distinguish between adipose tissue and blood tissue 2
- 20) Identify the following mouth parts of cockroach and label (A, B) and (C) in both (a) and (b). 2



Section-C

- 21) Mention the special features of eye in cockroach. 5
- 22) Describe the structure of adipose tissue briefly with the help of diagram. 5
- 23) Distinguish between a male cockroach and female cockroach. 5

Section-A

- 1) Yellow elastic fibers and white collagen fibres 1
- 2) Young cartilage cells - Chondroblasts Mature cartilage cells - Chondrocytes 1
- 3) It has secretory function 1
- 4) **Origin** Ectoderm , endoderm and mesoderm **Function** Protection . secretion and absorption 1
- 5) Keratinised stratified squamous epithelium 1
- 6) Ligaments are formed of yellow elastic connective tissues. The ligaments join the two adjacent bones. 1
- 7) White fibrous cartilage 1
- 8) Layers of the dermis of frog are (i) The upper stratum spongiosum (ii) The lower stratum compactum 1
- 9) Three,i.e., two auricles and one ventricle 1
- 10) In earthworm, intestine starts from the 15th segment onwards and continues till the last segment. 1

Section-B

- 11) 2
 The yellow bone marrow is composed of adipose tissues. It stores fat and produces corpuscles in emergency and is present in the shafts of long bones.
- 12) Shape of tadpole is fish-like. Thyroxine hormone helps the tadpole in its metamorphosis. 2
- 13) 2
 Neuroglia cells are packed around the neurons in the brain,spinal cord and ganglia.neuroglia cells have various functions like myelination, transport of materials to neurons maintenance of ionic balance and phagocytosis.
- 14) 2
 Bidder's canal is present in the kidney of frog. It communicates with the ureter, which leaves the kidney near its end and opens into the cloaca.
- 15) 2
 Some important features found in eyes of cockroach are
 (i) They are located on the dorsal side of head
 (ii) They are compound eyes and composed of 2000 hexagonal units called ommatidia.
 (iii) They receive several images of an object. The number of ommatidia produces a mosaic vision which has more sensitivity and less resolution.
- 16) 2
 Earthworms are protandrous,i.e.,the testes mature earlier than the ovaries. Self fertilisation is not possible in them because of the relative position of the openings of male and female reproductive organs.

- 17) Differences between simple gland and compound gland 2
- | | |
|--|---|
| Simple Gland | Compound Gland |
| It is an exocrine gland with a single unbranched duct
e.g. glolet cells | It contains of cluster of glandular epithelial cells
e.g.salivary glands |
- 18) 2
- Differences between dense regular and dense irregular connective tissue are given below
- | | |
|--|--|
| dense regular connective tissue | dense irregular connective tissue |
| The cells and fiber are arranged compactly and the orientation of fiber shows a regular patten | The cells and fiber are arranged compactly but, the fiber are not oriented in a regular patten |
| The collagen fiber bundles are in parallel rows | The fibers run in different direction |
- 19) Differences between adipose tissue and blood tissue 2
- | | |
|--|--|
| adipose tissue | blood tissue |
| It is a soft gel -like connective tissue | It is a fluid connective tissue |
| It is partitioned into lobules by septa | there are no partitions |
| It is a strage tissue | It is trans port tissues |
| Matrix is secereted by the cells | matrix is not secreted by the cells |
| It contains fiber | Fiber are not conspicuous. |
| Adipocytes contain fat drioped | No cell of this tissue cantains fat droplets |
- 20) (a) Labrum - A - Sensory setae B - Muscles 2
(b) Mandible - A - Prostheda B - Condyle C - Denticles.

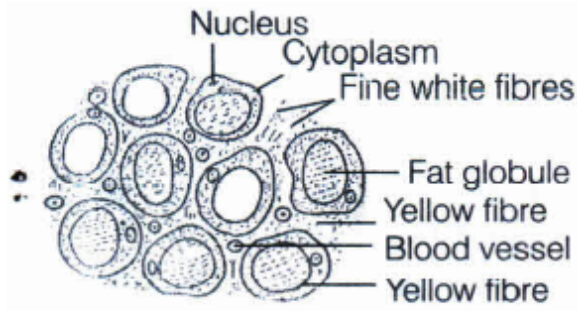
Section-C

- 21) 5
- In cockroach, there are two types of eyes, i.e., apair of simple eye and a pair of compound eyes. A compound eye has upto 2000 hexagonbal units called ommatidia. These are responsible for producing mosaic vision. The adjacent ommatidia are separated internally by the pigment cells. An ommatidium has two parts
- (i) Outer dioptoric or focussing part, which (i) consisits of a corneal lens, two corneagen cells, a crystalline cone and four cone cells or vitrellae.
- (ii) Inner receptive part has a spindle-shaped pigment contaning rhadome surrounded by eight retinulae which continue as nerve fibre.

22)

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Adipose tissue is a flat storing connective tissue. Its matrix is packed with the large, spherical or oval fat cells or adipocytes. The fibres are few in number and form a loose network for supporting fat laden cells.



Structure of an adipose tissue

This tissue is found in the subcutaneous parts, in the mesenteries, covering of the heart and around the blood vessels and kidneys. The adipose tissue mainly stores reserve food. It acts as shock absorbing cushions around the heart, kidneys, eyeball, etc.

23) Differences between male and female cockroach are

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Male Cockroach	Female Cockroach
Abdomen is long and narrow	Abdomen is short and broad
All nine sterna are visible	Only seven sterna are visible
Anal styles are present	Anal styles are absent
7th tergum covers 8th tergum	7th tergum covers 8th and 9th terga.
Brood pouch is absent	B
Antennae are longer in size	Antennae are smaller in size
Wings extend beyond the tip of abdomen	Wings extend upto the end of abdomen

24)

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Differences between male and female frog

Male frog	Female frog
Vocal cords are present on ventrolateral side of throat	Vocal sacs are absent
Croaking is more louder	Croaking is less louder
Forelimbs are stouter and more muscular	Forelimbs are less muscular
Amplexusory pads are present on ventral side of index fingers	Amplexusory pads are absent
During breeding season, abdomen does not change much	Abdomen gets swollen during breeding season as it is full of ova released from mature ovaries.