

Structural Organisation in Animals

I. Select the correct answers from the following:

Question 1.

Ligaments joins

- (a) Muscle to Muscle
- (b) Bone to bone
- (c) Skin to muscles
- (d) Nerves to muscles

▼ [Answer](#)

Answer: (b) Bone to bone

Question 2.

Bone forming cells are

- (a) Chondroclasts
- (b) Osteoblasts
- (c) Chondroblasts
- (d) Osteoclasts

▼ [Answer](#)

Answer: (b) Osteoblasts

Question 3.

Adjacent epithelial cells are held together by

- (a) Oxysomes
- (b) Ribosomes
- (c) Desmonemes
- (d) Desmosomes

▼ [Answer](#)

Answer: (d) Desmosomes

Question 4.

Afferent nerve fibres carries impulses from

- (a) Receptor to central nervous system
- (b) Central nervous system to muscles
- (c) Effector to central nervous system
- (d) Central nervous system to receptors.

▼ [Answer](#)

Answer: (a) Receptor to central nervous system

Question 5.

Most human neurons are

- (a) Unipolar
- (b) Bipolar
- (c) Multipolar
- (d) Pseudounipolar

▼ [Answer](#)

Answer: (c) Multipolar

Question 6.

Epithelial tissue with thin flat cells appearing like packed tiles occurs on

- (a) Outer surface of ovary
- (b) Inner lining of cheek
- (c) Inner lining of fallopian tubes
- (d) Inner lining of stomach

▼ [Answer](#)

Answer: (b) Inner lining of cheek

Question 7.

Achondroplasia is a disease related with the defect in the formation of

- (a) Mucosa
- (b) Bone
- (c) Cartilage
- (d) Membrane

▼ [Answer](#)

Answer: (c) Cartilage

Question 8.

Cartilage is formed by

- (a) Chondriocytes
- (b) Fibroblasts
- (c) Osteoblasts
- (d) Osteoclasts

▼ Answer

Answer: (a) Chondriocytes

Question 9.

Tendons connect

- (a) Nerve to muscle
- (b) Bone to muscle
- (c) Bone to bone
- (d) Muscle to muscle

▼ Answer

Answer: (b) Bone to muscle

Question 10.

The camel's hump is composed of a tissue which provides water when oxidised. It is

- (a) Adipose
- (b) Skeletal
- (c) Areolar
- (d) Muscular

▼ Answer

Answer: (a) Adipose

Question 11.

Maximum numbers of white blood corpuscles is that of

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

▼ Answer

Answer: (b) Neutrophils

Question 12.

Matrix of areolar tissue is secreted by

- (a) Fibrocytes
- (b) Mast cells
- (c) Histiocytes
- (d) None of these

▼ Answer

Answer: (b) Mast cells

Question 13.

Urinary bladder is lined with

- (a) Simple epithelium
- (b) Pseudostratified epithelium
- (c) Stratified epithelium
- (d) Transitional epithelium

▼ Answer

Answer: (d) Transitional epithelium

Question 14.

Germinal epithelium of ovary is formed of

- (a) Columnar epithelium
- (b) Cuboidal epithelium
- (c) Stratified epithelium
- (d) Squamous epithelium

▼ Answer

Answer: (b) Cuboidal epithelium

Question 15.

Basement membrane is made up of

- (a) Endodermal cells only
- (b) Epidermal cells only
- (c) No cells at all, but is product of epithelial cells
- (d) Both epidermal and endodermal cells.

▼ Answer

Answer: (c) No cells at all, but is product of epithelial cells

Question 16.

Protein present in the matrix of cartilage is known as

- (a) Actin
- (b) Chondrin
- (c) Casein
- (d) Ossein

▼ Answer

Answer: (b) Chondrin

Question 17.

Nissl's granules occur in

- (a) Epithelial cells
- (b) Nerve cells
- (c) Cartilage cells
- (d) Muscle fibres

▼ Answer

Answer: (c) Cartilage cells

Question 18.

Outer covering of cartilage is known as

- (a) Peritonium
- (b) Endosteum
- (c) Periosteum
- (d) Perichondrium

▼ Answer

Answer: (d) Perichondrium

II. Fill in the blanks

Question 1.

The body of a simple organism like is made of different types of cells and the number of cells in each type can be in

▼ Answer

Answer: hydra, thousands

Question 2.

All complex animals consist of only four basic types of tissues. These tissues are organised in specific proportion and pattern to form an organ like,, and

▼ Answer

Answer: stomach, lung, heart, kidney

Question 3.

The tissues are different and are broadly classified into four types as (i) (ii) (iii) and (iv)

▼ Answer

Answer: Epithelial, Connective, Muscular, Neural

Question 4.

There are two types of epithelial tissues namely and

▼ Answer

Answer: simple epithelium, compound epithelium

Question 5.

Simple epithelium is further divided into three types. These are (1) (2) (3)

▼ Answer

Answer: Squamous, Cuboidal, Columnar

Question 6.

Some of the columnar or cuboidal cells get specialised for secretion and are called

▼ Answer

Answer: glandular epithelium

Question 7.

..... help to stop substance from leaking across a tissue.

▼ Answer

Answer: Tight junctions

Question 8.

..... perform cementing to keep neighbouring cell together.

▼ Answer

Answer: Adhering junctions

Question 9.

..... facilitate the cells to communicate with each other by connecting the cytoplasm of adjoining cells, for rapid transfer of ions, small molecules and sometimes' big molecules.

▼ Answer

Answer: Gap junctions

Question 10.

They range from soft connective tissues to specialised types, which include,, and

▼ Answer

Answer: cartilage, bone, adipose, blood

Question 11.

..... is a contractile tissue present only in the heart.

▼ Answer

Answer: Cardiac muscle tissue

Question 12.

The common Indian earthworms are and

▼ Answer

Answer: Pheretima, Lumbricus

Question 13.

The body is divisible into three prominent regions, and

▼ Answer

Answer: preclitellar, clitellar, post clitellar segments

Question 14.

The body of the cockroach is segmented and divisible into three distinct regions, and

▼ Answer

Answer: head, thorax, abdomen

Question 15.

The body cavity of frogs accommodate different organ system such as,,, and reproductive systems with well developed structures and functions.

▼ Answer

Answer: digestive, circulatory, respiratory, nervous, excretory

III. Mark the statements True (T) or False (F)

Question 1.

In multicellular animals, a group of similar cells along with inter-cellular substance perform a specific function. Such an organisation is called tissue.

▼ Answer

Answer: True

Question 2.

The tissues are different and are broadly classified into three types as (i) Neural (ii) Muscular (iii) Connective

▼ Answer

Answer: False

Question 3.

On the basis of structural modification of the cells, simple epithelium is further divided into two types. There are 1. Squamous, 2. Columnar

▼ Answer

Answer: False

Question 4.

Some of the columnar or cuboidal cells get specialised for secretion and are called ciliated epithelium

▼ Answer

Answer: False

Question 5.

Lome connective tissue has cells and fibres loosely arranged in a semi-fluid ground substance, for example, adipose tissue present between the skin.

▼ Answer

Answer: False

Question 6.

The intercellular material of cartilage is solid and pliable and resists compression.

▼ Answer

Answer: True

Question 7.

Bones have a hard and non-pliable ground substance rich in calcium salts and collagen fibres which give bone its strength.

▼ Answer

Answer: True

Question 8.

Blood is a fluid connective tissue containing plasma, red blood cells, white blood cells and platelets.

▼ Answer

Answer: True

Question 9.

The smooth muscle is a contractile tissue present only in the heart.

▼ Answer

Answer: False

Question 10.

Cardiac muscle tissue taper at both ends (fusiform) and do not show striations.

▼ Answer

Answer: False

Question 11.

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

▼ Answer

Answer: True

Question 12.

Each organ in our body is made of one or more type of tissues. For example, our heart consists of all the four types of tissues, Le. epithelial, connective, muscular and neural.

▼ Answer

Answer: True

Question 13.

Earthworms have small cylindrical body. The body is divided into more than ten short segments which are similar.

▼ Answer

Answer: False

Question 14.

Thorax consists two parts – mesothorax and metathorax.

▼ Answer

Answer: False

Question 15.

Frog's respire on land and in the water by two different methods.

▼ Answer

Answer: True

IV. Match the column I with column II.

Column I	Column II
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(a) Frog has different types of sense organs	1. mesorchium
(b) Male frog reproductive organs	2. each containing 14-16 eggs.
(c) The frog excretes urea and thus is	3. longitudinal connectives on the ventral side.
(d) The prominent endocrine glands found in frog are	4. structures called anal cerci.
(e) Body of a frog is divisible into	5. a vortelic animal
(f) On an average, females produce 9-10 oothecae	6. foregut, midgut and hind gut.
(g) The female reproductive system consists of two large ovaries	7. namely organs of touch (sensory papillae), taste (taste buds), smell (nasal epithelium), vision (eyes) and hearing (tympanum with internal ears).
(h) The nervous system of cockroach consists of a series of fused, segmentally arranged ganglia joined by paired	8. head and trunk
(i) Sperms are transferred through	9. lying laterally in the 2nd- 6th abdominal segments.
(j) Ootheca is a dark reddish to	10. Consists of 10 segments.
(k) In both sexes, the 10th segment a pair of jointed filamentous.	11. pituitary, thyroid, parathyroid, thymus, pineal body, pancreatic islets, adrenals and gonads.
(l) The alimentary canal present in the body cavity is divided into three regions.	12. spermatophores.
(m) The abdomen in both males and females	13. (bisexual), i.e. testes and ovaries are present in the same individual.
(n) The mouth parts consisting of a labrum (upper lip), a pair of mandibles	14. blackish brown capsule, about 3/8" (8mm) long.
(o) Earthworm is hermaphrodite	15. a pair of maxillae and a labium (lower lip)

▼ Answer

Answer:

Column I	Column II
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