

STRUCTURAL ORGANIZATION IN ANIMALS

01. Compound tissue is defined as
- 1) Similar types of cells held together by connective tissue
 - 2) Different types of cells which are different in structure and function
 - 3) Different types of cells performing one function
 - 4) Similar cells at different regions performing many functions.
02. Epidermis of skin of vertebrates comprises
- 1) Simple epithelium
 - 2) Stratified epithelium
 - 3) Transitional epithelium
 - 4) Columnar epithelium
03. Tesselated epithelium is found in
- 1) Lining of intestine
 - 2) Lining of blood vessel
 - 3) Seminiferous tubule
 - 4) Uriniferous tubules
04. Areolar tissue connects-
- 1) The skin with muscles
 - 2) Muscles to muscles
 - 3) Bone to bone
 - 4) Bone to muscles
05. Tendon is made up of-
- 1) Yellow fibrous connective tissue
 - 2) Adipose tissue
 - 3) Modified white fibrous tissue
 - 4) Areolar tissue
06. Fibres present in connective tissue are
- 1) Reticular
 - 2) Elastic
 - 3) Collagen
 - 4) All the above
07. Mast cells occur in
- 1) Areolar tissue
 - 2) Adipose tissue
 - 3) White fibrous tissue
 - 4) Yellow fibrous tissue
08. A tissue in which matrix is the source of structural and functional performance is
- 1) Muscular
 - 2) Epithelial
 - 3) Connective
 - 4) Nervous
09. Perichondrium covers the -
- 1) Bone
 - 2) Cartilage
 - 3) Decalcified bone
 - 4) Dried bone
10. 60% inorganic components are present in
- 1) Cartilage
 - 2) Bone
 - 3) Connective tissue
 - 4) None of these.
11. Blood is a -
- 1) Epithelial tissue
 - 2) Muscular tissue
 - 3) Connective tissue
 - 4) Supportive tissue

12. In man, the number of R.B.C. per cubic mm of blood is
 1) 1 to 3 millions
 2) 5 to 5.4 millions
 3) Less than one million but more than 50 thousand
 4) Less than 50 thousand
13. Muscle fibres having rounded ends are
 1) Unstriated muscles
 2) Smooth muscles
 3) Striped muscles
 4) All the above
14. Inter-calated discs are present in –
 1) Cardiac muscles
 2) Striped muscles
 3) Unstriated muscles
 4) Ligament
15. Myosin filaments are localized in
 1) Z- Band
 2) H-Band
 3) A-Band
 4) None of the above.
16. Multinucleate muscle cells are
 1) Striped muscles
 2) Smooth muscles
 3) Cardiac muscles
 4) All the above
17. Rhythmical contraction is noticed in –
 1) Cardiac muscles
 2) Striped muscles
 3) Unstriated muscles
 4) In all the muscles
18. Nissel's granules are absent in
 1) Dendrons and dendrites
 2) Cyton
 3) Axon
 4) Dendrons and cyton
19. Plasmalemma of axon is called
 1) Axolemma
 2) Neurilemma
 3) Sarcolemma
 4) None of these.
20. Myelin sheath is present around the –
 1) Non-medullated nerve fibre
 2) Medullated nerve fibre.
 3) Medullated and non-medullated nerve fibres
 4) Muscle fibres
21. The packing cells around nerve cells in brain are called.
 1) Histiocytes
 2) Mast cells
 3) Matrix
 4) Neuroglia cells.
22. Which is correct
 1) A medullated nerve fibre appears grey
 2) A non medullated nerve fibre appears white
 3) Neurilemma is composed of Schwann cells
 4) Neurilemma is composed of neuroglia cells.

- 41 Skin is a
 (a) Cuboidal epithelium (b) Columnar epithelium (c) Pseudostratified epithelium (d) Stratified epithelium
- 42 The abdomen of adult cockroaches has segments
 (a) 4 (b) 6 (c) 8 (d) 10
- 43 Steriocilia occur in
 (a) Columnar epithelium of stomach (c) Pseudostratified columnar epithelium of trachea
 (b) Pseudostratified columnar epithelium of epididymis (d) Stratified columnar epithelium of pharynx
- 44 Which statement is correct?
 (a) Mast cells and basophils secrete histamine and heparin
 (b) Mast cells are long lived, basophils are short lived
 (c) Mast cells are smaller than basophils with a bilobed nucleus
 (d) Mast cells are relatively sessile, basophils are mobile
- 45 Which of these is not found in connective tissue?
 (a) Collagen fibres (b) Basement membrane (c) Hyaluronic acid (d) Fluid
- 46 Hyaline Cartilage does not have
 (a) Fibres (b) Lacunae (c) Blood capillaries (d) Cells
- 47 The ciliated columnar epithelial cells in humans are known to occur in
 (a) Bile duct and oesophagus (c) Eustachian tube and stomach lining
 (b) Fallopian tubes and urethra (d) Bronchioles and Fallopian tubes
- 48 The cockroach crushes food with the help of its
 (a) Labium (b) First maxillae (c) Mandibles (d) Antennae
- 49 The supportive skeletal structures in the human external ears and in the nose tip are examples of
 (a) Ligament (b) Areolar tissue (c) Bone (d) Cartilage
- 50 Read the following statements and choose the correct options
 (a) Blood cells secrete fibres of structural proteins called collagen or elastin
 (b) Neurological cells protect and support the nephrons
 (c) Osteocytes are present in spaces called lacunae

(d) smooth muscle fibres are bundled together in parallel fashion

Test paper- Structural organization in animals

1. Histamine secreting cells are found in
 - a) Connective tissues
 - b) Nervous tissue
 - c) Lungs
 - d) Muscular tissue
2. The layer of actively dividing cells of skin is termed as
 - a) Stratum compactum
 - b) Stratum corneum
 - c) Stratum lucidum
 - d) Stratum malpighii/ Stratum germinativum
3. Characteristic of simple epithelium is that they
 - a) are arranged indiscriminately
 - b) continue to divide and help in organ function
 - c) Make a definite layer
 - d) None of above
4. Collagen is
 - a) lipid
 - b) Fibrous protein
 - c) Globular protein
 - d) Carbohydrate
5. Aerolar connective tissue joins
 - a) Haemoglobin
 - b) Hirudin
 - c) Myoglobin
 - d) Histamine
6. Lamina propria is connected with
 - a) Acini
 - b) Liver
 - c) Graffian follicle
 - d) Intenstine
7. Haversian canals occur in
 - a) Humerus
 - b) Pubis
 - c) Clavicle
 - d) Scapula
8. Hair present in the skin are
 - a) Epidermal in origin and made of dead cells
 - b) Epidermal in origin and made of living cells
 - c) Dermal in origin and made of living cells
 - d) Dermal in origin and made of dead cells
9. Basement membrane is made up of
 - a) No cell product of epithelial cell
 - b) Epidermal cell only
 - c) endodermal cell
 - d) Both b and c
10. Characteristic of smooth muscle fibres are
 - a) Spindle shaped, unbranched, nonstriated, uninucleate and involuntary
 - b) Spindle shaped, unbranched, nonstriated, multinucleate and involuntary
 - c) Cylindrical, unbranched, striated, multinucleate and voluntary
 - d) Cylindrical, unbranched, striated, uninucleate and voluntary
11. Lymph differs from blood in possessing
 - (a) only WBC
 - (b) more RBC and WBC
 - (c) more RBC and few WBC
 - (d) more WBC and few RBC.

12. Mineral found in red pigment of vertebrate blood is
(a) magnesium (b) iron (c) calcium (d) copper.
13. Component of blood responsible for producing antibodies is
(a) thrombocytes (b) monocytes (c) erythrocytes (d) lymphocytes.
14. Afferent nerve fibre carries impulses from
(a) effector to central nervous system (b) receptor to central nervous system
(c) central nervous system to muscles (d) central nervous system to receptors.
15. Formation of cartilage bones involves
(a) deposition of bony matter by osteoblasts and resorption by chondroclasts
(b) deposition of bony matter by osteoclasts
(c) deposition of bony matter by osteoclasts only
(d) deposition of bony matter by osteoblasts only.
16. An epithelial tissue which has thin flat cells, arranged edge to edge so as to appear like closely packed tiles, is found to be present at
(a) outer surface of ovary (b) inner lining of fallopian tube
(c) inner lining of stomach (d) inner lining of cheeks.
17. The life span of human WBC is approximately
(a) between 2 to 3 months (b) more than 4 months
(c) less than 10 days (d) between 20 to 30 days.
18. Stratum germinativum is an example of which kind of epithelium?
(a) columnar (b) squamous (c) cuboidal (d) ciliated.
19. Which of the following is agranulocyte?
(a) basophil (b) neutrophil (c) lymphocyte (d) eosinophil.
20. Protein present in cartilage is
(a) cartilagin (b) ossein (c) chondrin (d) none of these.
21. Which of the following is not the main function of lymph glands?
(a) forming RBCs (b) destroying bacteria (c) forming WBCs (d) forming antibodies.
22. In mammals, histamine is secreted by
(a) lymphocytes (b) mast cells (c) fibroblasts (d) histiocytes.
23. Tendon is made up of
(a) yellow fibrous connective tissue (b) modified where fibrous tissue
(c) areolar tissue (d) adipose tissue.

24. Ligament is a/an
(a) inelastic white fibrous tissue (b) modified white fibrous tissue
(c) modified yellow elastic fibrous tissue (d) none of the above.
25. The joint between atlas and axis is called
(a) angular joint (b) hinge joint (c) pivot joint (d) saddle joint.
26. Which statement is true for WBC?
(a) non-nucleated (b) in deficiency, cancer is caused
(c) manufactured in thymus (d) can squeeze through blood capillaries.
27. Which pair is correct?
(a) sweat = temperature regulation (b) saliva = sense of food taste
(c) sebum = sexual attraction (d) humerus = hind leg.
28. Characteristic of simple epithelium is that they
(a) are arranged indiscriminately (b) make a definite layer
(c) continue to divide and help in organ function (d) none of the above.
29. Proteoglycan in cartilages which is a part of polysaccharide is
(a) chondroitin (b) ossein (c) casein (d) cartilagin.
30. What is sarcomere?
(a) part between two H-line (b) part between two A-line
(c) part between two I-band (d) part between two Z-line.
31. Which cells do not form layer and remains structurally separate?
(a) epithelial cells (b) muscle cells (c) nerve cells (d) gland cells.
32. During an injury nasal septum gets damaged and for its recovery which cartilage is preferred?
(a) elastic cartilage (b) hyaline cartilage (c) calcified cartilage (d) fibrous cartilage.
33. Melanin protects from
(a) U.V. rays (b) visible rays (c) infrared rays (d) X-rays.
34. Which of the following statements is true for lymph?
(a) WBC + serum (b) blood – RBCs and some proteins
(c) RBCs + WBCs + plasma (d) RBCs + proteins + platelets
35. Collagen is
(a) fibrous protein (b) globular protein (c) lipid (d) carbohydrate.
36. Which one of the following contains the largest quantity of extracellular material?
(a) striated muscle (b) areolar tissue (c) stratified epithelium (d) myelinated nerve fibres

37. What is true about T-lymphocytes in mammals?
- (a) there are three main types – cytotoxic T-cells, helper T-cells and suppressor T-cells
 - (b) these originate in lymphoid tissues
 - (c) they scavenge damaged cells and cellular debris
 - (d) these are produced in thyroid
38. Mast cells of connective tissue contain
- (a) vasopressin and relaxin
 - (b) heparin and histamine
 - (c) heparin and calcitonin
 - (d) serotonin and melanin.
39. Four healthy people in their twenties got involved in injuries resulting in damage and death of few cells of the following. Which of the cells are least likely to be replaced by new cells?
- (a) liver cells
 - (b) neurons
 - (c) malpighian layer of the skin
 - (d) osteocytes.
40. Which of the following substances, if introduced into the blood stream, would cause coagulation of blood at the site of its introduction?
- (a) prothrombin
 - (b) fibrinogen
 - (c) thromboplastin
 - (d) heparin.
41. Mast cells secrete
- (a) haemoglobin
 - (b) hippurin
 - (c) myoglobin
 - (d) histamine
42. Areolar connective tissue joins
- (a) bones with bones
 - (b) fat body with muscles
 - (c) integument with muscles
 - (d) bones with muscles
43. In which one of the following preparations are you likely to come across cell junctions most frequently?
- (a) thrombocytes
 - (b) tendon
 - (c) hyaline cartilage
 - (d) ciliated epithelium.
44. A drop of each of the following is placed separately on four slides. Which of them will not coagulate?
- (a) blood serum
 - (b) sample from the thoracic duct of lymphatic system
 - (c) whole blood from pulmonary vein
 - (d) blood plasma.
45. Which one of the following pairs of structures distinguishes a nerve cell from other types of cell?
- (a) vacuoles and fibres
 - (b) flagellum and medullary sheath
 - (c) nucleus and mitochondria
 - (d) perikaryon and dendrites.