

Yakeen NEET 2.0 (2026)

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Structural Organization in Animals

DPP:5

- Q1** Select the incorrect match
- (A) Adipocytes - Fat storing cells
 - (B) Chondrocytes - Secrete matrix which is organised into lamellae
 - (C) Osteocytes - Present in spaces called lacunae
 - (D) Erythrocytes - Cells carrying oxygen transporting pigment in blood

- Q2** Solid and pliable matrix that resists compression occurs at all locations given except
- (A) Nasal septum
 - (B) Tip of nose
 - (C) Intervertebral disc
 - (D) Femur

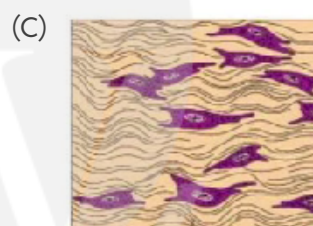
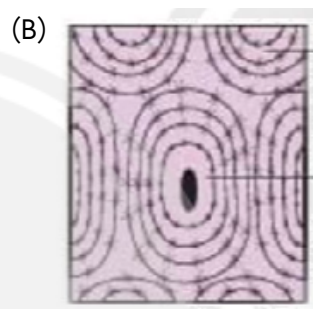
- Q3** Ligament connects
- (A) Humerus to biceps
 - (B) Tibia to femur
 - (C) Biceps to triceps
 - (D) Triceps to humerus

- Q4** Collagen fibres are secreted by
- (A) Histiocytes
 - (B) Fibroblasts
 - (C) Mast cells
 - (D) Macrophages

- Q5** Read the following statements
- (a) Ground substance is hard and non-pliable
 - (b) Rich in collagen fibres and calcium salts
 - (c) Main tissue that provides a structural frame to the body

Identify the tissue on the basis of given characteristics and choose the correct option from the given diagrams

(A)



- Q6** Which among the following difference is incorrect between bone and cartilage?



Option	Bone	Cartilage
(1)	Hard and pliable	Solid and non-pliable
(2)	Composed of osteocytes	Composed of chondrocytes
(3)	Present in spaces called as lacunae	Enclosed in small cavities within matrix secreted by them
(4)	In adults, bone > cartilage	In vertebrate embryo, cartilage > bone

- (A) (1) (B) (2)
(C) (3) (D) (4)

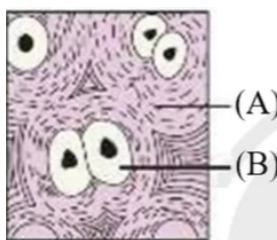
Q7 Major inorganic components of vertebrate bone are:

- (A) Potassium hydroxide
(B) Calcium phosphate
(C) Calcium carbonate
(D) None of the above

Q8 The membrane that surrounds the bone is known as.....

- (A) Pericardium (B) Periosteum
(C) Perichondrium (D) Endosteum

Q9 In the given diagram of cartilage, identify *A* and *B*



- (A) A-Collagen fibres; B-Chondrocyte
(B) A-Osteocyte; B-Collagen fibres
(C) A-Fibroblast; B-Osteocyte
(D) A-Chondrocyte; B-Collagen fibres

Q10 Cells which help in the formation of bones are called:

- (A) chondroblasts.
(B) osteoblasts.
(C) osteoclasts.
(D) chondroclasts.

Q11 Fill up the blanks **A** to **E** with correct combination.

I. Osteocytes are present in spaces called...**A**...

II.**B**.... and ...**C**... give strength to bones.

III. Most of...**D**... in vertebrates embryos are replaced by ...**E**... in adults.

- (A) A-cavities, B-Phosphorus, C-fibres, D-tissue, E-cells
(B) A-lacunae, B-Calcium salts, C-collagen fibres, D-cartilage, E-bones
(C) A- cytoplasm, B-Potassium salts, C-calcium, D-muscles, E-cartilage
(D) A-air sacs, B-Iron, C-phosphorus, D-cells, E-tissue

Q12 Lacunae enclosed tissue cells in:

- (A) cartilage.
(B) bone tissue.
(C) both (A) and (B)
(D) muscular tissue.

Q13 Mammalian bone differs from cartilage in the presence of

- (A) Lymph vessels
(B) Collagen
(C) Blood vessels
(D) Haversian canals

Q14 Cells of cartilage (chondrocyte) are enclosed in small cavities within the matrix secreted by

- (A) Osteoclast (B) Osteoblast
(C) Chondrocyte (D) Chondroclasts

Q15 Which of the following statement is/are **not correct** regarding connective tissue?

- (i) They are the most abundant and widely distributed in the body of complex animals
(ii) They connect and support other tissues
(iii) They include diverse tissues such as bones, cartilage, tendons, adipose, and other loose connective tissues
(iv) They form the internal and external lining of many organs
(v) Blood is an example of a fluid connective tissue
(A) (iv) only (B) (v) only



(C) (i) and (ii) (D) (ii) and (v)

Q16 Find the **incorrect** statement.

- (A) Intercellular material of cartilage is solid, pliable and resist compression.
- (B) Most of the cartilage in vertebrate embryos are replaced by bones in adults.
- (C) Loose connective tissue has cells and fibers loosely arranged in semi fluid ground substance.
- (D) Connective tissues are less abundant and widely distributed in body.

Q17 _____connective tissue cells does not secrete fibres of structural proteins called collagen or elastin.

- (A) Blood
- (B) Cartilage
- (C) Adipose
- (D) Areolar

Q18 Excess of nutrients which are not used immediately are stored in _____ tissue

- (A) areolar tissue
- (B) adipose Tissue
- (C) tendon
- (D) bone

Q19 Choose the correct option which has all the right statements for bones.

- a. Bones have a hard and non-pliable ground substance
 - b. Matrix of bone is rich in calcium salt and free from collagen fibres
 - c. The bone marrow in some bones is the site of production of blood cells
 - d. Bone is a type of specialised connective tissue
- (A) a, b and c
 - (B) a, c and d
 - (C) a and d only
 - (D) All of these



Answer Key

Q1 (B)

Q2 (D)

Q3 (B)

Q4 (B)

Q5 (B)

Q6 (A)

Q7 (B)

Q8 (B)

Q9 (A)

Q10 (B)

Q11 (B)

Q12 (C)

Q13 (D)

Q14 (C)

Q15 (A)

Q16 (D)

Q17 (A)

Q18 (B)

Q19 (B)



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