

Class:
Subject: Biology
Topic: Human Reproduction
No. of Questions: 20
Duration: 60 Min
Maximum Marks: 60

1. Epithelial cells of the intestine involved in food absorption have on their surface
 - A. pinocytic vesicles
 - B. phagocytic vesicles
 - C. zymogen granules
 - D. microvilli

Detailed Answer:

Epithelial cells of the intestine involved in food absorption have microvilli on their surface to increase surface area for food absorption.

Answer: D

2. The cell junctions called tight, adhering and gap junctions are found in
 - A. muscular tissue
 - B. connective tissue
 - C. epithelial tissue
 - D. neural tissue

Detailed Answer:

In epithelial tissue, the adjacent cells form ion-rich gap or cell junctions for intercellular communication and chemical exchange. These junctions probably do not provide physical support.

Answer: C

3. In the diagram given below, parts labelled as 'A', 'B', 'C', 'D' and 'E' respectively represent
 - A. A- Stratum granulosum, B-Sweat gland, C-Stratum germinativum, D-Sebaceous gland, E-Stratum corneum
 - B. A-Stratum granulosum, B-Sebaceous gland, C-Stratum germinativum, D-Sweat gland, E-Stratum corneum
 - C. A-Stratum germinativum, B-Sweat gland, C-Stratum lucidum, D-Sebaceous gland, E-Stratum corneum
 - D. A-Stratum germinativum, B-Sebaceous gland, C-Stratum lucidum, D-Sweat gland, E-Stratum corneum

Detailed Answer:

A-Stratum germinativum,
B-Sebaceous gland,
C-Stratum lucidum,
D-Sweat gland,
E-Stratum corneum

Answer: D

4. The type of epithelial cells, which line the inner surface of fallopian tubes, bronchioles and small bronchi, are known as
- A. squamous epithelium
 - B. columnar epithelium
 - C. ciliated epithelium
 - D. cubical epithelium

Detailed Answer:

The type of epithelial cells that line the inner surface of fallopian tubes, bronchioles and small bronchi, are known as **ciliated epithelium**.

Answer: C

5. Tendons and ligaments are specialized types of
- A. nervous tissue
 - B. muscular tissue
 - C. epithelial tissue
 - D. connective tissue

Detailed Answer:

Tendons and ligaments are the dense, fibrous connective tissues. Tendon connects a skeletal muscle to a bone, while ligaments connect bones together.

Answer: D

6. Which of the following are phagocytic in nature?
- A. Neutrophil, monocyte and basophil
 - B. Neutrophil, monocyte and macrophage
 - C. Neutrophil, basophil and macrophage
 - D. Acidophil, basophil and lymphocyte

Detailed Answer:

Neutrophil, monocyte and macrophages are types of white blood cells. The granular white blood cells neutrophils, eosinophils and agranular leucocytes including monocytes and tissue macrophages are phagocytic in nature. Basophils are non-phagocytic and involved in allergic reactions.

Answer: B

7. Haversian lamellae are the structures found in
- A. hyaline cartilage
 - B. fibrous cartilage
 - C. bone marrow
 - D. myelin sheath

Detailed Answer:

The Haversian canals are vertical canals present parallel to the length of bones. About 4-20 concentric rings of Haversian lamellae normally surround one Haversian canal. This complete system of lamella along with one Haversian canal is called one osteon and is found in the bone marrow of mammals.

Answer: C

8. Role of spleen in mammals is to
- A. control blood pressure
 - B. assist liver
 - C. act as haemopoietic tissue
 - D. assist kidneys

Detailed Answer:

Spleen in mammals acts as haemopoietic tissue because synthesis of WBCs takes place in spleen lymphocytes, for the destruction and recycling of old red blood cells. The spleen is also a blood reservoir.

Answer: C

9. Which of the following cells are round and biconcave shape?
- A. White blood cells
 - B. Red blood cells
 - C. Columnar epithelial cells
 - D. Nerve cells

Detailed Answer:

Red blood cells (RBCs) or erythrocytes are the most abundant of all the cells in blood. They are devoid of nucleus in most of the mammals and are round or biconcave in shape. It is biconcave because such a shape has increase surface area (for O₂ transfer) and allows easy squeezability of the RBCs through the blood vessels.

Answer: B

10. Blood platelets are found only in the blood of
- A. birds
 - B. reptiles
 - C. mammals
 - D. amphibians

Detailed Answer:

Platelets are irregularly shaped membrane bound cell fragments. These are found only in the blood of **mammals**, they usually lack nuclei and are formed from special bone marrow. They are responsible for blood clotting. They survive for 5 to 9 days before being destroyed by the spleen and liver.

Answer: C

11. Which is not phagocytic?
- A. Monocyte
 - B. Lymphocyte
 - C. Mast cell
 - D. Neutrophil

Detailed Answer:

Lymphocyte is not phagocytic in nature. They produce antibodies as they are the key cells of immune system.

Answer: B

12. Blood cells involved in inflammatory reactions are

- A. basophils
- B. neutrophils
- C. eosinophils
- D. monocytes

Detailed Answer:

An infection or tissue injury usually causes redness, swelling, pain and production of heat that may result in fever. Such an expression is called **inflammation**. Neutrophils are most abundant, phagocytic WBCs. Their number increases during inflammation.

Answer: B

13. Life period of mammalian erythrocytes is

- A. 120 days
- B. 180 days
- C. 140 days
- D. 220 days

Detailed Answer:

Erythrocytes (red blood corpuscles) of mammals (man) are around, biconcave and non-nucleated. Life span of mammalian RBCs is about 120 days (4 months).

Answer: A

14. During inflammation, which of the following is secreted by connective tissue?

- A. Heparin
- B. Histamine
- C. Serotonin
- D. Glucagon

Detailed Answer:

The inflammatory process begins with a chemical 'alarm' as a flood of inflammatory chemicals are released into the extra cellular fluid. Injured and stressed tissue cells, phagocytes, lymphocytes, mast cells and blood proteins are all sources of inflammatory mediators, the most important of which are **histamine, kinins, prostaglandins and complement**.

Answer: B

15. Collagen is a

- A. phosphoprotein
- B. globulin
- C. derived protein
- D. scleroprotein

Detailed Answer:

Scleroproteins are the proteins of supportive tissue and occur in hard parts of animal body. These are insoluble in water, absolute alcohol, dilute acid or alkali or other neutral solvents. Examples of scleroproteins are keratin, collagen, elastin, fibroin, chondrin, ossein, etc.

Answer: D

16. Most radiosensitive tissue of body is

- A. bone marrow
- B. platelet
- C. nervous tissue
- D. lymphocyte

Detailed Answer:

The mature bone generally has two types of parts-compact (dense and solid) or periosteal bone and spongy bone. The spongy bone (cancelous or tubercular bone) consists of bony bars. The red bone marrow, is the most radio-sensitive tissue of the body.

Answer: A

17. Epimysium, perimysium and endomysium are found in

- A. nerve
- B. blood vessel
- C. striated muscle
- D. uterus

Detailed Answer:

The striated or striped or skeletal or voluntary muscles are in the form of bundles of individual muscle fibres. These bundles are called fasciculi. These fasciculi are covered by three coverings of connective tissue. These coverings are epimysium (outermost covering), perimysium (middle covering) and endomysium (innermost covering).

Answer: C

18. The muscles surrounding the pupil of rabbit's eye are

- A. unstriated and involuntary
- B. striated and voluntary
- C. unstriated and voluntary
- D. striated and involuntary

Detailed Answer:

Unstriped muscles are also known as non-striated, visceral, smooth or involuntary muscles. Muscle fibres of smooth muscle are uninucleated and spindle-shaped, e.g., **muscles of pupil of eye, uterus**, etc.

Answer: A

19. Minimum regeneration power is present in

- A. nervous tissue
- B. connective tissue
- C. epithelial tissue
- D. None of these

Detailed Answer:

Minimum regeneration power is present in nervous tissue. Centrosomes which help in cell division, are absent in nerve cell and these are highly differentiated cells. So, power of division is absent in nerve cells.

Answer: A

20. Nerve cells are the part of

- A. epithelial tissue
- B. connective tissue
- C. muscles tissue
- D. nervous tissue

Detailed Answer:

Nerve cells is unit of nervous tissue. It is specialized for communication between various parts of the body and in integration of their activities.

Answer: D