

一. 單選題 (30分) ※注意：請於試卷「選擇題作答區」依題號作答。※

1. All the following statements are true of epithelia except
 - (A) They typically demonstrate an abundance of intercellular substance.
 - (B) They demonstrate strong adhesion between cells.
 - (C) They may be derived from any of the embryonic germ layers.
 - (D) They are capable of performing absorptive functions.
 - (E) They are capable of secretion.

2. In the development of skeletal muscle,
 - (A) muscle cells are predominantly of endodermal origin.
 - (B) myotubes form from the fusion of mononucleate myoblasts.
 - (C) the multinucleate arrangement is produced by amitosis.
 - (D) myoblasts are incapable of cell proliferation.
 - (E) depletion of growth factors such as FGF stimulates the proliferation of skeletal muscle.

3. Which of the following statements is true of the histologic structure of neurons?
 - (A) The presence of Nissl occurs only in motor neurons.
 - (B) Pseudounipolar neurons are found predominantly in the retinal and olfactory epithelia and in the vestibular and acoustic ganglia.
 - (C) Bipolar neurons are found predominantly in the dorsal root ganglia.
 - (D) Axons are multiple, short processes that contain extensive rough endoplasmic reticulum
 - (E). The dendrites and perikarya are receptive to environmental stimuli.

4. All the following belong to the conduction portion of the respiratory system except the
 - (A) trachea (B) bronchi (C) bronchioles (D) alveoli (E) larynx

5. Epidermal Langerhans cells are correctly described by which of the following statements?
 - (A) They are neuroendocrine cells.
 - (B) They are specialized keratinocytes.
 - (C) They are antigen-presenting cells.
 - (D) They synthesize melanin.
 - (E) They form extensive desmosomes.

6. The formation of the acrosome
 - (A) occurs in the epididymis.
 - (B) occurs after the release of the developing spermatids from the Sertoli cells.
 - (C) involves the maturation of lysosomal enzymes.
 - (D) involves mitotic activity.
 - (E) involves meiotic divisions.

7. All the following are found exclusively in the renal cortex except
 - (A) proximal convoluted tubules
 - (B) distal convoluted tubules
 - (C) afferent arterioles
 - (D) collecting ducts
 - (E) glomeruli

8. Diabetic retinopathy may be characterized by all the following except
 - (A) thickening of the basal lamina of small retinal vessels.
 - (B) loss of phagocytotic ability of the pigmented epithelium.
 - (C) hemorrhage of retinal vessels.
 - (D) retinal ischemia and proliferation of new vessels.
 - (E) microaneurysms.

9. Endolymph is located in all the following structures except the
 - (A) utricle (B) saccule (C) semicircular canals (D) scala media (E) scala tympanic

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10. Vasa vasorum provides a function analogous to that of
(A) coronary arteries (B) basal lamina (C) valves (D) endothelial diaphragms (E) arterioles
11. The blood vessels that serve the brain and spinal cord are most abundant in which layer?
(A) dura mater (B) epineurium (C) arachnoid (D) perineurium (E) pia mater
12. The stage in ovarian follicle development that immediately follows the multi-laminar primary follicle is the
(A) unilaminar primary follicle (B) secondary follicle (C) primordial follicle (D) corpus albicans
(E) Graafian follicle
13. The most widely held theory of hematopoiesis, in which all cell types are believed to be derived from a single pluripotential stem cell, is termed
(A) the polyphyletic theory (B) the medullolymphatic theory (C) the monophyletic theory
(D) the monopoietic theory (E) none of the above
14. All the following show a decrease in amount from trachea to alveoli except
(A) elastic fibers (B) cilia (C) smooth muscle (D) cartilage (E) goblet cells
15. The cell type in bone most probably derived from blood monocytes is the
(A) osteocyte (B) periosteal fibroblast (C) osteoblast (D) osteoclast (E) endothelial cell

※下列題目請標明題號，依序作答於試卷內「非選擇題作答區」。※

二、請簡要說明二種軟骨的生長方式。(6%)

三、請簡要描述腎上腺組織的分層結構。(8%)

四、請依序說明表皮(Epidermis)的五個分層為何。(10%)

五、請簡要描述 Collagen fibers 的組成方式。(10%)

六、請繪圖說明 Cochlea 的構造。(10%)

七、請繪圖說明肝臟組織結構的 Liver lobules 與 Liver Acinus 的差異。(10%)

八、請繪圖說明血液在脾臟中的循環過程，並簡要描述各部位的生理功能。(16%)

試題隨卷繳回