



Histology Self-Assessment Examination

First Year Pharmacy Students

Time allowed: 2 hour

• Section A (40 Marks)

Choose The Most Correct Answer:

1) **The light microscope is composed of all the following EXCEPT:**

- a) Objective lens
- b) Condenser
- c) Light source
- d) Stage
- e) Electrode

2) **One micrometer is equal to:**

- a) 10 nanometers
- b) 100 nanometers.
- c) 1000 nanometers.
- d) 10 angstroms.
- e) 100 angstroms.

3) **The organelle that produce energy is:**

- a) Golgi apparatus
- b) Ribosomes
- c) Plasmalemma
- d) Mitochondria
- e) Centrioles

4) **Smooth endoplasmic reticulum is involved in:**

- a) Synthesis of steroid hormones
- b) Protein metabolism
- c) Synthesis of proteins
- d) Cell division
- e) Phagocytosis

5) **Golgi apparatus is involved in:**

- a) Cell division
- b) Synthesis of lipids
- c) Protein synthesis
- d) Pinocytosis
- e) Protein metabolism

6) **The greatest number of lysosomes is found in:**

- a) Lymphocytes
- b) Erythrocytes
- c) Fibroblasts
- d) Macrophages
- e) Fat cells

7) **Telomeres are found at :**

- a) The end of the cilium.
- b) The end of the chromosome.
- c) The middle of the chromosome.
- d) The centromere.
- e) The centrioles

8) **The following is true about the epithelium EXCEPT:**

- a) Have many cellular junctions.
- b) Lines surfaces and cavities.
- c) Have a basement membrane.
- d) Mitotically active.
- e) Highly vascular.

9) **Pseudostratified columnar epithelium is found in:**

- a) Esophagus.
- b) Colon.
- c) Trachea.
- d) Epidermis.
- e) Tongue.

10) **The extracellular matrix of connective tissue is formed of all the following EXCEPT :**

- a) Glycoproteins
- b) Collagen fibers
- c) Reticular fibers
- d) Surfactant
- e) Proteoglycans

11) **Plasma cells are characterized by the following EXCEPT:**

- a) Ovoid cells.
- b) Derived from T-lymphocytes.
- c) Clock-faced nucleus.
- d) Produce antibodies.
- e) Found in the connective tissues.

12) **All the following are functions of cartilage EXCEPT:**

- a) forms embryonic skeleton
- b) bear mechanical stress.
- c) provides a low friction surface
- d) support soft tissues
- e) contain bone marrow.

13) **All the following are bone cells EXCEPT:**

- a) Osteocyte
- b) Osteoblast
- c) Osteoclast
- d) Alveolar cells
- e) Osteoprogenitor cells

14) **Nerve cells contain:**

- a) Sarcomere
- b) Matrix
- c) Nissl granules
- d) Eccentric nuclei
- e) Few mitochondria

15) Schwann cells produce:

- a) energy
- b) myelin
- c) proteins
- d) sugar
- e) water

16) From the outside to the inside; peripheral nerves are surrounded by the following layers:

- a) Endoneurium, perineurium, epineurium
- b) Epineurium, perineurium, endoneurium
- c) Epineurium, endoneurium, perineurium
- d) Perineurium, endoneurium, epineurium
- e) Perineurium, epineurium, endoneurium

17) Cells forming the blood-brain barrier are:

- a) Astrocytes
- b) Microglia
- c) Schwann cells
- d) Ependymal cells
- e) Oligodendrocytes

18) The normal range of the erythrocyte's diameter is:

- a) 7-8 μm
- b) 8-9 μm
- c) 6-10 μm
- d) 8-10 μm
- e) 9-10 μm

19) The normal count of white blood cells is about:

- a) 5000-8000 WBCs/mm³
- b) 4000-20000 WBCs/mm³
- c) 4000-10000 WBCs/mm³
- d) 7000-10000 WBCs/mm³
- e) 4000-15000 WBCs/mm³

- 20) **Cells of the blood include the following EXCEPT:**
- a) Neutrophils
 - b) Lymphocytes
 - c) Monocytes
 - d) Erythrocytes
 - e) Mast cells
- 21) **Intima of blood vessels is lined by:**
- a) Simple columnar endothelium
 - b) Simple squamous endothelium
 - c) Simple cubical endothelium
 - d) Stratified squamous epithelium
 - e) Stratified cubical epithelium
- 22) **The average diameter of blood capillaries is about:**
- a) 15 - 20 μm
 - b) 13 - 30 μm
 - c) 10 - 15 μm
 - d) 5 - 10 μm
 - e) 7 - 9 μm
- 23) **What type of tissue makes up the rings of the trachea?**
- a) Fibrocartilage
 - b) Elastic cartilage
 - c) Hyaline cartilage
 - d) Spongy bones
 - e) Dense connective tissue
- 24) **Maturation of T-lymphocytes occur in:**
- a) Spleen
 - b) Thymus
 - c) Lymph nodes
 - d) Tonsils
 - e) Bone marrow
- 25) **Billroth's cords are found in:**
- a) Spleen
 - b) Thymus
 - c) Lymph nodes
 - d) Liver
 - e) Bone marrow

26) Thick skin is characterized by:

- a) Presence of hairs
- b) Presence of sebaceous glands
- c) Presence of stratum lucidum
- d) Absence of sweat glands
- e) Absence of stratum corneum

27) The dermis is characterized by:

- a) Presence of collagen fibers
- b) Presence of nails
- c) Presence of skeletal muscles
- d) Presence of keratinized cells
- e) Absence of connective tissue

28) The trachea contain:

- a) Bone marrow
- b) Musculosa
- c) Elastic cartilage
- d) Respiratory epithelium
- e) Fibrocartilage

29) Surfactant is secreted by:

- a) Type II alveolar cells
- b) Type I alveolar cells
- c) Type III alveolar cells.
- d) Respiratory epithelium.
- e) Bronchioles.

30) The oesophagus is lined by:

- a) Simple columnar epithelium
- b) Simple squamous epithelium
- c) Simple cubical epithelium
- d) Stratified squamous epithelium
- e) Stratified cubical epithelium

31) Parietal cells (or oxyntic cells) is present in:

- a) oesophagus
- b) Salivary glands
- c) Stomach
- d) Small intestines
- e) Large intestines

32) **Plicae circulares is present in:**

- a) Oesophagus
- b) Oral cavity
- c) Stomach
- d) Small intestines
- e) Large intestines

33) **Which one of the following is present in the liver:**

- a) Lymphoid nodules.
- b) Portal triads.
- c) Glomeruli.
- d) Goblet cells.
- e) Elastic connective tissue.

34) **Growth hormone is secreted by:**

- a) Chromophobe cells
- b) Mammotrophs
- c) Somatotrophs
- d) Thyroid Gland
- e) Adrenal Cortex

35) **Zona fasciculata is present in:**

- a) Pineal gland
- b) Parathyroid glands
- c) Adrenal cortex
- d) Adrenal medulla
- e) Thyroid gland

36) **The nephron contains all the following EXCEPT:**

- a) Renal corpuscle
- b) Proximal convoluted tubule
- c) Loop of Henle
- d) Distal convoluted tubule
- e) Seminiferous Tubules

37) Which cell differentiates directly into spermatozoa:

- a) Sertoli cells
- b) Spermatids
- c) Spermatogonia
- d) Secondary spermatocytes
- e) Primary spermatocytes

38) Ovulation occurs by:

- a) Primordial follicle
- b) Mature Graafian follicle
- c) Primary follicle
- d) Secondary follicle
- e) Corpus luteum

39) The retina contains the following layers EXCEPT:

- a) Optic nerve fiber layer.
- b) Outer plexiform layer.
- c) Choroid layer
- d) Inner nuclear layer.
- e) Layer of rods and cones.

40) Organ of Corti is present in:

- a) Cochlear Duct
- b) Middle ear
- c) External ear
- d) Retina
- e) Cornea

• **Section B: (15 Marks)**

Match between both columns: "Letters & Numbers", selecting the most closely related items:

| Answers | Letters | Numbers |
|---------|--------------------|------------------------------|
| | A. Eustachian tube | 1) Megakaryocytes |
| | B. Cardiac muscles | 2) ATP |
| | C. Plasma cells | 3) Renal corpuscle |
| | D. Platelets | 4) Protein synthesis |
| | E. Lymphocytes | 5) Intercalated discs |
| | F. Surfactant | 6) Posterior pituitary |
| | G. Podocytes | 7) Testosterone synthesis |
| | H. Mitochondria | 8) Retina |
| | I. Golgi apparatus | 9) Biconcave discs |
| | J. Oocyte | 10) Antibodies |
| | K. RBCs | 11) Type-II alveolar cells |
| | L. Vasopressin | 12) Luteinizing hormone (LH) |
| | M. Leydig cells | 13) B and T cells |
| | N. Rods and cones | 14) Middle ear |
| | O. Gonadotrophs | 15) Zona pellucida |

• **Section C: (10 Marks)**

- 1- Enumerate types of connective tissue cells
- 2- Enumerate cells of the pituitary gland
- 3- Enumerate cells of the gastric mucosa
- 4- Enumerate (by order) cells forming spermatozoa
- 5- Enumerate (by order) layers of the retina

• **Section D: (5 Marks)**

Demonstrate the following, **BY USING TABLES:**

- 1) Comparison of different types of muscles
 - 2) Comparison of renal proximal and distal convoluted tubules
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• **Section E: (10 Marks)**

Complete the following sentences with the appropriate words:

- 1) Golgi apparatus has a face which receives the transport vesicles from rER and face which releases the secretory vesicles.
- 2) Epithelium which consists of a single layer is called:, while that which have multiple layers is called:
- 3) Types of connective tissue fibers include: , and •
- 4) Compact (dense) bone have structural units called:
- 5) Nerve cells contain the characteristic granules in their cytoplasm.

MCQ Answer Sheet

| | | | | | | | | | | | |
|----|---|---|---|---|---|----|---|---|---|---|---|
| 1 | a | b | c | d | e | 21 | a | b | c | d | e |
| 2 | a | b | c | d | e | 22 | a | b | c | d | e |
| 3 | a | b | c | d | e | 23 | a | b | c | d | e |
| 4 | a | b | c | d | e | 24 | a | b | c | d | e |
| 5 | a | b | c | d | e | 25 | a | b | c | d | e |
| 6 | a | b | c | d | e | 26 | a | b | c | d | e |
| 7 | a | b | c | d | e | 27 | a | b | c | d | e |
| 8 | a | b | c | d | e | 28 | a | b | c | d | e |
| 9 | a | b | c | d | e | 29 | a | b | c | d | e |
| 10 | a | b | c | d | e | 30 | a | b | c | d | e |
| 11 | a | b | c | d | e | 31 | a | b | c | d | e |
| 12 | a | b | c | d | e | 32 | a | b | c | d | e |
| 13 | a | b | c | d | e | 33 | a | b | c | d | e |
| 14 | a | b | c | d | e | 34 | a | b | c | d | e |
| 15 | a | b | c | d | e | 35 | a | b | c | d | e |
| 16 | a | b | c | d | e | 36 | a | b | c | d | e |
| 17 | a | b | c | d | e | 37 | a | b | c | d | e |
| 18 | a | b | c | d | e | 38 | a | b | c | d | e |
| 19 | a | b | c | d | e | 39 | a | b | c | d | e |
| 20 | a | b | c | d | e | 40 | a | b | c | d | e |

Good Luck

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