



"Investing in Africa's future"

COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES

DEPARTMENT OF BIOMEDICAL AND LABORATORY SCIENCES

NSLS 106: HUMAN ANATOMY

END OF FIRST SEMESTER FINAL EXAMINATIONS

NOVEMBER 2022

LECTURER: DR A. KAPFUNDE

DURATION: 3 HRS

INSTRUCTIONS

Answer ALL questions in section A and B then choose 2 questions from section C

The mark allocation for each question is indicated at the end of the question

Credit will be given for logical, systematic and neat presentations

SECTION A

Write T(true) or F(false) on each of the statements given in each question. There is a total of 40 marks

1. Cell Theory explains about
 - a) All living organisms are composed of cell and cell products.
 - b) Cell is the basic unit of structure & function of all living organisms.
 - c) All cells come from the division of preexisting cell.
 - d) An organism as a whole can be understood through the collective activities & interactions of its tissues.
2. The function of the plasma membrane includes to:
 - a. Separate the cytoplasm inside a cell from extra cellular fluid.
 - b. Separate cell from one another
 - c. Provide an abundant surface on which chemical reaction can occur.
 - d. Allow all substances to move in and out of cells.
3. Endoplasmic reticulum is:
 - a. Continuous with the nuclear membrane.
 - b. It's involved in intracellular exchange of material with the cytoplasm.
 - c. Various products are transported from one portion of the cell to another via the endoplasmic reticulum hence, it is considered as intracellular transportation.
 - d. It is also the storage for synthesized molecules.
4. Fibrocartilage is found in the following areas of the body:
 - a. Intervertebral discs
 - b. Symphysis pubis
 - c. Hip joint
 - d. Menisci of the knee
5. The functions of merocrine sweat glands include:
 - a. Cooling the skin by evaporation
 - b. Excreting sweat to dilute harmful chemicals
 - c. Excreting waste products and metabolites
 - d. Antibacterial activities.
6. The direction of osmosis is determined by:
 - a. pH of both solutions
 - b. temperature of the fluid and that of the membrane

- c. concentration of the dissolved solutes on both sides of the membrane
 - d. temperature of the intracellular solutions.
7. The following are the functions of connective tissue:
- a. Protection
 - b. Binding and support
 - c. Insulation
 - d. Transportation of substances.
8. The following are types of neuroglial cells
- a. Bipolar neuron
 - b. Multipolar neuron
 - c. Ependymal cell
 - d. Axon
9. The ovaries produce the following hormones:
- a. Estrogen
 - b. Progesterone
 - c. Inhibin
 - d. Follicle stimulating hormone.
10. The Hypothalamus is the master gland which produces the following
- a. Regulation of sleep-wake cycle
 - b. Synthesizes 9 hormones
 - c. Is the link between the endocrine and the nervous system.
 - d. Regulates growth of individuals through growth hormone.

SECTION B

Answer all questions and there is a total of 20 marks

- 1. State the characteristics of skeletal muscles (3)
- 2. State the 9 hormones produced by the hypothalamus. (9)
- 3. Describe the classification of epithelial tissue (8)

SECTION C

Answer any 2 questions and there is a total of 40 marks

- 1 Describe the heart and its function (20 marks)
2. State the 12 cranial nerves and their functions. (20 marks)
3. Outline the functions of the skin with reference to the mechanism of actions for each.
(20 marks)

END OF PAPER