

CHUKA



UNIVERSITY

**UNIVERSITY EXAMINATION**

**RESIT/SPECIAL EXAMINATION**

**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE  
IN NURSING**

**NURS 111: HUMAN ANATOMY 1**

**STREAMS:**

**TIME: 2 HOURS**

**DAY/DATE: MONDAY 01/11/2021**

**2.30 P.M – 4.30 P.M**

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**INSTRUCTIONS TO CANDIDATES**

- **Do not write anything on the question paper.**
- **Mobile phones and any other reference materials are NOT allowed in the examination room.**
- **The paper has three (3) Sections. ALL the questions are compulsory**
- **Your answers for Section A (MCQs) should be on the first page of the answer Booklet.**
- **Number ALL your answers and indicate the order of appearance in the space provided in the cover page of the examination answer booklet.**

**SECTION A: MULTIPLE CHOICE QUESTIONS (20 Marks)**

1. The lipid component that determines the plasma membrane fluidity is:
  - a) Phospholipid
  - b) Protein
  - c) Cholesterol
  - d) Glycocalyx
2. Concerning plasma membrane glycolipids:
  - a) The anchor the plasma membrane to the basement membrane
  - b) They are amphipathic molecules
  - c) Increase plasma membrane permeability
  - d) Are found in the inner leaflet only
3. Which of the following organelle is abundant in the skeletal muscle than in any other tissue:
  - a) Mitochondria
  - b) Ribosomes
  - c) Lysosomes

- d) Golgi bodies
- 4. The nucleolus is:
  - a) Prominent in actively dividing cells
  - b) Enclosed by a lipid bilayer
  - c) Actively involved in protein synthesis
  - d) Present in all cells
- 5. The type of point mutation that does not produce any phenotypic effect is:
  - a) Missense
  - b) Nonsense
  - c) Silent
  - d) Disjunction
- 6. Exocrine glands include:
  - a) Thyroid, parathyroid
  - b) Sweat, thyroid
  - c) Salivary, parathyroid
  - d) Salivary, sweat
- 7. The epithelial tissue associated with the urinary bladder and ureters is:
  - a) Transitional
  - b) Pseudostratified ciliated columnar
  - c) Non keratinized stratified squamous
  - d) Simple squamous
- 8. The glycosaminoglycan associated with the cartilage is:
  - a) Hyaluronan
  - b) Keratin sulphate
  - c) Dermatan sulphate
  - d) Chondroitin sulphate
- 9. The neuroglia cell that produces cerebrospinal fluid is:
  - a) Ependymal
  - b) Microglia
  - c) Satellite
  - d) Oligodendrocyte
- 10. Most sensory neurons are:
  - a) Bipolar
  - b) Unipolar
  - c) Multipolar
  - d) Anaxonic
- 11. The most common site of implantation is:
  - a) Fallopian tube
  - b) Uterine fundus
  - c) Ovaries
  - d) Uterine body
- 12. Ductus venosus shunts blood from:
  - a) Right atrium to the left atrium
  - b) Pulmonary trunk to the arch of the aorta
  - c) Umbilical vein to the inferior vena cava
  - d) Right ventricle to the left ventricle

13. Which of the following correctly describes sperm capacitation:
  - a) Release of acrosin enzymes
  - b) Removal of glycoprotein layer on the sperm head
  - c) Acquisition of sperm motility
  - d) Fusion of the sperm with the secondary oocyte
14. The abdominal pelvic region containing most of the stomach is:
  - a) Inguinal
  - b) Lumbar
  - c) Umbilical
  - d) Suprapubic
15. In anatomic position, the organ ventral to the esophagus is:
  - a) Trachea
  - b) Cervical vertebrae
  - c) Liver
  - d) Arch of the aorta
16. Muscles of the neck include all of the following EXCEPT:
  - a) Trapezius
  - b) Lattismus dorsi
  - c) Sternocleidomastoid
  - d) Platysma
17. Which of the following is associated with the axis(C1):
  - a) Odontoid process
  - b) Bifid spinous process
  - c) Lateral masses
  - d) Grooves for vertebral artery
18. A bone of the proximal row of carpus is:
  - a) Capitate
  - b) Hamate
  - c) Trapezoid
  - d) Scaphoid
19. Rotator cuff muscles include the:
  - a) Deltoid
  - b) Subcapsularis
  - c) Brachialis
  - d) Biceps brachii
20. Medial and lateral condyles of the femur are separated by:
  - a) Intercondylar notch
  - b) Coronoid fossa
  - c) Popliteal fossa
  - d) Intertranchateric line

**SECTION B: SHORT ANSWER QUESTIONS (40Marks)**

1. Describe the five (5) functional proteins associated with the plasma membrane 5 marks
2. Outline the process of mitosis 4 marks

3. Compare and contrast cardiac and smooth muscle cells 6 marks
4. Draw a well labelled diagram of a myelinated neuron 5 marks
5. State five (5) distinct regions of the primitive heart 5 Marks
6. Outline five (4) joints of the upper limb 5 marks
7. Describe the origin, insertion action and innervations of the following muscles:
  - a) Deltoid 2 marks
  - b) Gluteus maximus 2 marks
8. Describe the three(3) types of ribs 6 marks

**SECTION C: LONG ANSWER QUESTION (40 Marks)**

1. Female reproductive cycles begin at puberty and end at menopause. They are regulated by a variety of hormones secreted by the hypothalamus and anterior pituitary.
    - a) State five(5) differences between oogenesis and spermatogenesis 5 marks
    - b) Describe the phases of the ovarian cycle 15 marks
  
  2. There are four types of tissues with connective tissue being the most abundant. They are made of cells connected by cell junctions.
    - a) Describe three (3) cell junctions 9 marks
    - b) Describe the cells and fibres associated with the connective tissue 11 marks
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