



**AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF NURSING & MIDWIFERY SCIENCES
KENYA REGISTERED COMMUNITY HEALTH NURSING
SUPPLEMENTARY/SPECIAL EXAMINATION**

COURSE CODE AND TITLE: DNS 112 ANATOMY AND PHYSIOLOGY

DATE: 31st July 2023

TIME ALLOWED: 2 HOURS

START 9.00AM

FINISH 11:00 PM

INSTRUCTIONS TO CANDIDATES:

1. This exam is marked out of 70%
2. It has 2 SECTIONS. **Section I :Multiple Choice Questions (MCQs)**, and Section II: **Short Answer Questions (SAQs)**
3. Answer All questions in the answer booklet provided.
4. **All** questions are compulsory.

1. Synarthrotic joints:-
 - a. Have no movement
 - b. Perform all movements
 - c. Are also called ball and socket joints
 - d. Are only found among adults
2. The smooth muscles are: -
 - a. Voluntary and striated
 - b. Involuntary and striated
 - c. Voluntary and non-striated
 - d. Involuntary and non-striated
3. Touch receptors responsible for heavy pressure and vibration sensations are: -
 - a. Free nerve endings
 - b. Meissner's corpuscles
 - c. Pacinian corpuscles
 - d. Mechanoreceptors
4. The epithelial tissue found on the plantar surface is: -
 - a. Columnar epithelium
 - b. Simple squamous epithelium
 - c. Stratified epithelium
 - d. Cuboidal epithelium
5. Ligaments joint:-
 - a. Bones to bones
 - b. Bones to muscles
 - c. Muscles to tendons
 - d. Tendons to bones
6. The normal Glomerular Filtration Rate (GFR) is:-
 - a. 125ml/min
 - b. 180ml/min
 - c. 100 ml/min
 - d. 150ml/min

7. The sympathetic division of the autonomic nervous system is associated with:-
 - a. Use of acetylcholine as its major neurotransmitter
 - b. Use of adrenalin as its major neurotransmitter
 - c. Relaxation of all smooth muscles
 - d. Contraction and relaxation of smooth muscles
8. The area of the cerebrum that regulates sensory component of speech is the-_
 - a. Basal ganglia
 - b. Internal capsule
 - c. Wernicke's area
 - d. Thalamus
9. In facilitated diffusion:-
 - a. Carrier proteins are used to transport essential nutrients
 - b. Solutes move spontaneously from a region of high concentration to that of low concentration
 - c. Water molecules move from a region of high to that of low concentration
 - d. Molecules move from region of high osmolarity to that of low osmolality
10. The Iris of the eye helps to: -
 - a. Focus images on the retina
 - b. Regulates amount of light entering the pupil
 - c. Send visual images to the brain
 - d. Prevent dust from entering the eye
11. In global aphasia there is:-
 - a. Damage to lower motor neurons
 - b. Injury to the upper motor neurons
 - c. Damage to both Brocas' area and Wernicke's area
 - d. Excess neurons in the motor cortex
12. The following is a fibrous joint:
 - a. Sutures joint
 - b. Acromioclavicular joint
 - c. Intercarpal joint
 - d. Pubic symphysis joint

13. Axial skeleton has:

- a. Eight cervical vertebral bones
- b. Ten thoracic vertebral bones
- c. Five lumbar vertebral bones
- d. Nine cervical vertebral bones

14. Pectoral girdle has;

- a. Three clavicular bones
- b. Two scapular bones
- c. One clavicular bone
- d. A sesamoid bone

15. The following is an innominate bone;

- a. Hip bone
- b. Scapula bone
- c. The patella or Knee cap
- d. Humerus bone

16. The last sense to die is,

- a. Visual sense
- b. Hearing sense
- c. Olfactory sense
- d. Tactile sense

17. Cytoplasmic organelles that detoxify harmful substances in the cells are: -

- a. Lysosomes
- b. Peroxisomes
- c. Cytoskeleton
- d. Ribosomes

18. Trans-membrane bulk transport includes: -

- a. Osmosis and diffusion
- b. Endocytosis and exocytosis
- c. Filtration and facilitated-diffusion
- d. Phagocytosis and simple diffusion

19. Internal respiration refers to: -
- gaseous exchange between pulmonary blood and alveoli
 - movement of air in and out of the lungs
 - gaseous exchange between blood and tissue cells
 - transport of oxygen and carbon dioxide via bloodstream
20. The probability of getting a child with blood group B if the mother is heterozygous blood group B and the father is homozygous blood group O is: -
- 25%
 - 50%
 - 0%
 - 100%
21. Substances returned to the blood stream by the lymphatic system include: -
- Bacteria, blood cells and cell debris
 - Macrophages, lymph and hormones
 - Enzymes, hormones and water
 - Water, blood cells and proteins
22. One of the following statement is true concerning colon: -
- It is approximately 6-7 meters
 - It is site for bacterial digestion of nutrients
 - Its wall has three muscularis layers
 - Chemical digestion of fats ends here
23. Secretion of growth hormones by the anterior pituitary gland is suppressed by: -
- Growth hormone suppressor hormone
 - Somatostatin
 - Thyroid stimulating hormone
 - Growth hormone releasing hormone
24. The hypothalamic hormone that stimulates the thyroid gland to secrete thyroxin (T₄) hormone is: -
- Thyroid Stimulating Hormone (TSH)
 - Thyrotropin Releasing Hormone (TRH)
 - Tri-iodothyronine
 - Calcitonin
25. The epidermal cells with immunological roles in the body are: -
- Merkel cells
 - Meissner's corpuscles
 - Langerhans cells
 - Squamous cells

26. Skin glands whose secretion is responsible for body temperature regulation are the: -
- Apocrine sweat glands
 - Sudiferous sweat glands
 - Sebaceous glands
 - Eccrine sweat glands
27. The two functional subdivisions of the autonomic nervous system (ANS) are: -
- Sensory and motor
 - Sympathetic and parasympathetic
 - Visceral and somatic
 - Brain and spinal cord
28. In peripheral nervous system (PNS), myelination is formed by: -
- Astrocytes
 - Schwann cells
 - Satellite cells
 - Microglial cells
29. The valve that prevents back flow of blood into the right atrium is: -
- Bicuspid valve
 - tricuspid valve
 - Aortic valve
 - Pulmonary valves
30. The unique feature of cardiac muscles is that they are: -
- Myogenic
 - Voluntary
 - Non-excitabile
 - Anucleic
31. The collapse of the alveoli in the lungs is prevented by: -
- Cilia
 - Surfactant
 - Pleural pressure
 - The intercostal muscles
32. Formation of glucose from proteins is known as:
- Proteolysis
 - Gluconeogenesis
 - Lipolysis
 - Glycogenesis
33. The water proof coating on human skin is due to: -
- Epidermis
 - Keratin
 - Melanin
 - Sebum

34. The enzyme trypsin: -
- Is present in the saliva
 - Digests starch in the stomach
 - Is deactivated by mucus
 - Digests proteins in the stomach
35. Parietal cells in the stomach secretes
- Pepsinogen
 - Intrinsic factor
 - Mucus
 - Water
36. Secretion of insulin is stimulated by: -
- Stress and adrenocorticotrophic hormone
 - Glucagon and low blood sugar
 - High blood sugar and amino acids
 - Sleep and physical exercise
37. Secretions that make semen appear milky are secreted by: -
- Seminal vesicles
 - Prostate glands
 - Cowper's glands
 - Bulbourethral glands
38. The uveal tract consists of: -
- Sclera and cornea only
 - Choroid, ciliary body and iris
 - Retina, lens and conjunctiva
 - Pupil, iris and retina
39. The gustatory impulses to the parietal lobe are transmitted by: -
- Facial, vagus and glossopharyngeal nerves
 - Olfactory nerve only
 - Vestibulocochlear nerve, vagus and facial nerves
 - Optic, olfactory and oculomotor nerves
40. The innominate bones of the pelvis include: -
- Coccyx, pubis and ilium
 - Ilium, sacrum and ischium
 - Ilium, ischium and pubis
 - Pubis, coccyx and sacrum

SECTION B: SHORT ANSWER QUESTIONS.

30 MARKS

1. Draw and label a diagram illustrating blood flow through the heart (10 marks)
2. Draw and label the diagram of femur (6 marks)
3. State five (5) effects of insulin hormone in the human body (5 marks)
4. State five (5) features of gynaecoid pelvis (5 marks)
5. Outline four (4) features of epithelial tissues (4 marks)

AMU