

# UGANDA ALLIED HEALTH EXAMINATIONS BOARD



## SEMESTER II, 2020/2021 EXAMINATIONS

**Programme:** DIPLOMA IN CLINICAL MEDICINE AND COMMUNITY HEALTH

**Course Code:** DCM 1201

**Course Name:** SYSTEMIC ANATOMY AND PHYSIOLOGY

**Time:** 09:00AM - 12:00NOON

**Date:** Tuesday 1<sup>st</sup> March, 2022

### **Instructions to Candidates:**

1. Read Instructions carefully.
2. Mobile phones even when switched off are prohibited in the examination room.
3. Write your Index number ONLY on all pages of your answer booklet(s).
4. Do not write on the question paper and Examination card.
5. Write all your answers in the answer booklet provided.
6. Do not take any paper outside the examination room.
7. All rough work should be done in the answer booklet and then crossed out. Pages must not be removed from the answer booklet.
8. Use a blue/black pen for writing and a pencil for drawing where necessary.
9. Candidates must not take into the examination hall or have in their possession any unauthorized apparatus, books, notes or paper of whatever nature or size.
10. The Paper is divided into three sections: A Multiple-Choice questions, B Short Answer Questions and C Essay questions. Attempt all questions
11. Wear your face mask throughout the examination and it should cover your mouth and nose

## **SECTION A: MULTIPLE CHOICE QUESTIONS (20 MARKS)**

Select and write in your answer booklet the letter representing the correct response.

1. Gametogenesis occurs in the;  
A. Uterus  
B. Gonads  
C. Epididymis  
D. Scrotal sac
  
2. Glycogenolysis in carbohydrate metabolism refers to the conversion of;  
A. Glucose to glycogen  
B. Glycogen to glucose  
C. Glucose to sorbitol  
D. Glycogen to sorbitol
  
3. Which of the following occurs when the nerve cell is stimulated?  
A. Influx of potassium ions and efflux of sodium ions  
B. Influx of sodium ions and efflux of potassium ions  
C. Influx of sodium ions and potassium ions  
D. Efflux of sodium ions and potassium ions
  
4. What name is given to the condition in which testes fail to descend into the scrotum shortly before birth?  
A. Testicular torsion  
B. Cryptorchidism  
C. Incapacitation  
D. Sterility
  
5. .....muscles are responsible for pupillary constriction.  
A. Ciliary  
B. Radial  
C. Circular  
D. Longitudinal .
  
6. Taste buds that are responsible for detecting the salty taste are located at..... aspect on the tongue.  
A. Anterior  
B. Lateral  
C. Posterior  
D. Superior
  
7. The sensory nerve fibres that convey nerve impulses from the alimentary canal to central nervous system are;  
A. Myenteric plexus  
B. Somatic sensory fibres  
C. Visceral sensory fibres  
D. Afferent sensory fibres
  
8. Conduction of sound from the middle ear to the inner ear occurs via vibration of the.  
A. Malleus against the tympanic membrane  
B. Stapes in the oval window  
C. Incus in the round window  
D. Stapes against the tympanic membrane
  
9. Receptors on the skin that are responsible for sensitivity to touch, pressure and slow vibration are;  
A. Pacinian corpuscles  
B. Meissner's corpuscles  
C. Ruffini corpuscles  
D. Merkel corpuscles
  
10. Which the following hormones is not secreted by the placenta?  
A. Human chronic gonadotropin  
B. Estrogen  
C. Luteinizing hormone  
D. Progesterone

11. Follicle stimulating hormone is responsible for the initiation of ..... development.

- A. Corpus luteum
- B. Ovarian follicle
- C. Graafian follicle
- D. Germinal layer

12. Which of these functions is not exclusively for aldosterone in the homeostatic control of the body?

- A. Regulation of sodium ion
- B. Increases heart rate
- C. Adjust blood volume
- D. Adjust blood pressure

13. Which part of the alimentary canal has three layers of smooth muscle?

- A. Duodenum
- B. Colon
- C. Ileum
- D. Stomach

14. Parietal cells in the stomach secrete;

- A. Gastrin
- B. Histamine
- C. Rennin
- D. Intrinsic factor

15. The ..... nerve supplies most of the extrinsic muscles of the eye.

- A. Oculomotor
- B. Trochlear
- C. Abducent
- D. Optic

16. The following are conditions for salivary amylase to work longest in the stomach, except:

- A. Large meals
- B. Weak gastric motility
- C. Food bolus taking longer to break up
- D. PH of 3 - 4

17. Atrial natriuretic peptide is released when;

- A. Blood pressure reduces
- B. Blood volume increases
- C. There is hyperkalaemia
- D. Blood volume reduces

18. Hydrochloric acid a component of gastric juice is secreted by the ..... cells.

- A. G
- B. Goblet
- C. Chief
- D. Oxyntic

19. Which of the following is not a tropic hormone?

- A. Thyroid stimulating hormone
- B. Follicle stimulating hormone
- C. Growth hormone
- D. Luteinizing hormone

20. Which of the following occur as a result of non descent of testis?

- A. Viable sperms will not be produced
- B. Sperms will have no means of exit from the body
- C. Male sex hormones will not be circulated in the body
- D. Inadequate blood supply will retard the development of the testis

## SECTION B: SHORT ANSWER QUESTIONS (20 MARKS)

21. State four (4) adaptations of the small intestine to its function.

(4 marks)

22. State the function of each of the following functional areas of the cerebral cortex.

- (i) Broca's area (1 mark)
- (ii) Somatosensory area (1 mark)
- (iii) Gustatory area (1 mark)
- (iv) Primary motor area (1 mark)
- (v) Wernicke's area (1 mark)

23. (a) Stating the secretion of each, list three (3) endocrine cells of the pancreas (3 marks)

(b) State the location of the following endocrine glands;

- (i) Pineal gland (1 mark)
- (ii) Adrenal gland (1 mark)
- (iii) Thymus gland (1 mark)

24. State;

- (i) The three (3) layers of the testis (1½ marks)
- (ii) Two (2) functions of Sertoli cells (1 mark)
- (iii) The hormone responsible for milk let down (1 mark)
- (iv) Three (3) phases of the menstrual cycle (1½ marks)

### SECTION C: ESSAY QUESTIONS (60 MARKS)

25. (a) State four (4) functions of the colon. (4 marks)  
(b) Describe the chemical digestion of fats. (16 marks)

26. (a) State four (4) differences between sympathetic and parasympathetic nerves. (4 marks)

(b) Explain one (1) effect of sympathetic nerve stimulation on the following organs;

- (i) Eye (1 mark)
- (ii) Heart (1 mark)
- (iii) Bronchial tree (1 mark)
- (iv) Urinary bladder (1 mark)

(c) State one (1) effect of parasympathetic nerve stimulation on the following organs:

- (i) Blood vessel (1 mark)
- (ii) Stomach (1 mark)
- (iii) Rectum (1 mark)
- (iv) Parotid Gland (1 mark)

(d) Describe the formation, flow and drainage of cerebrospinal fluid in the brain. (12 marks)

27. (a) Define spermatogenesis. (1 mark)  
(b) Describe the hormonal regulation of spermatogenesis. (11 marks)  
(c) Name and define four (4) physiological disorders of the male reproductive system. (8 marks)

END