



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MEDICAL SCIENCES

UNIVERSITY EXAMINATION FOR:

BACHELOR OF MEDICAL LABORATORY SCIENCES

AMD 4210: HUMAN PHYSIOLOGY II

END OF SEMESTER EXAMINATION

SERIES:DECEMBER2016

TIME: 2HOURS

DATE: Dec2016

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of Choose NoSection(s). AttemptALL questions.

Circle the correct answer in section A.

PAPER ONE

SECTION A;

Attempt all questions in this section

Attempt all the questions provided in this section

1. Which of the following secretes aldosterone, cortisol, and DHEA :
 - a. Anterior pituitary gland.
 - b. Adrenal gland .
 - c. Thyroid gland.
 - d. Hypothalamus.
 - e. Posterior pituitary gland.

2. Glucagon is made from which of the following?
 - a. In the beta cells in the islet of the pancreas
 - b. In the beta cells of the islet of the liver
 - c. In the alpha cells in the islet of the pancreass
 - d. In the alpha cells in the islet of the liver

- e. Non of the above
3. The pancreatic duct transports secretions from the pancreas to the
- a. stomach
 - b. small intestine
 - c. large intestine
 - d. colon
 - e. duodenum
4. Which cells both STORE excess glucose as glycogen when stimulated by insulin :
- a. Liver
 - b. muscle
 - c. brain
 - d. both a and b
 - e. both b and c
5. QRS wave in ECG represents:
- a. atrial repolarization
 - b. ventricular depolarization
 - c. ventricular repolarization
 - d. atrial depolarization
 - e. left ventricular relaxation time
6. Which of the following hormones promote lipolysis
- a. growth hormone
 - b. glucagone
 - c. cortisol (in some tissues)
 - d. _all of the above
 - e. Non of the above
7. Which would be an example of positive feedback
- a. Release of oxytocin to increase the strength of labor contractions
 - b. Shivering to generate heat in a situation where body temperature is below normal
 - c. Release of insulin to decrease a high level of glucose in the blood
 - d. Release of glucagon to increase a below normal level of glucose in the blood
 - e. none of the above
8. Effects of thyroid hormones on cardiovascular system are due to:
- a. increasing the sensitivity of adrenergic receptors
 - b. Stimulating transcription of potent myosin gene in the myocardium
 - c. Their vasoconstrictive effect which increase blood pressure
 - d. _A and b are true
 - e. B and c are true
9. Homeostatic imbalance has occurred when a?
- a. person sweats as a result of being hot.
 - b. person shivers as a result of being cold.
 - c. person becomes ill.

- d. person's heart rate increases as a result of exercise.
- e. person's breathing rate increases as result of exercise

10. Which of the following body systems acts as a fast-acting control system for the body?

- a. Endocrine
- b. Reproductive
- c. Respiratory
- d. Skeletal
- e. Nervous

11. Which of the following body systems functions to produce blood cells

- a. Circulatory
- b. Reproductive
- c. Respiratory
- d. Urinary
- e. Skeletal

12. The following are examples of granulocytes except

- a. Neutrophils
- b. Monocytes
- c. Eosionophils
- d. Basophils
- e. None of the above

13. The kidney is important in the regulation of the following function except

- a. BP control
- b. acid-base balance
- c. excretion of urea
- d. detoxification of substances such as drugs
- e. red blood cell production

14. The kidney performs the following functions except

- a. hormone production
- b. BP maintenance and control
- c. calcitonin production
- d. ultra filtration
- e. none of the above

15. The following hormone is responsible for milk production

- a. oestrogen
- b. progesterone
- c. prolactin
- d. adrenaline
- e. oxytocin

16. Testosterone is responsible for the following process

- a. sex determination
- b. proliferation of the ovary
- c. development of the testis in male
- d. spermatogenesis
- e. all of the above

17. Which of the following neurotransmitters is not secreted by the adrenal gland

- a. Dopamine
- b. serotonin
- c. epinephrine
- d. norepinephrine
- e. Adrenaline

18. The following hormone is important in the maturation of the follicles in female ovary

- a. GRH
- b. FSH
- c. LH
- d. Progesterone
- e. TSH

19. Which of the following is not the conducting zone of the respiratory system

- a. larynx
- b. trachea
- c. primary bronchus
- d. Terminal bronchioles
- e. None of the above

20. Which of the following statements is true about the cardiovascular system

- a. systemic blood supply is more than the pulmonary blood supply
- b. systemic blood supply is less than pulmonary blood supply
- c. pulmonary blood supply is two times more than than systemic blood supply
- d. pulmonary blood supply is two times less than systemic blood supply
- e. pulmonary blood supply is equal to the systemic blood supply

21. Which of the following is not true about testosterone

- a. Responsible for initiation and maintenance of body changes in puberty
- b. secreted by leydig cells

- c. Stimulate growth of bone growth after sealing of the epiphyseal disc
 - d. inhibit LH and GnRH production
 - e. promote hemoglobin synthesis
22. Which of the following hormone triggers ovulation
- a. LH
 - b. FSH
 - c. estrogen
 - d. progesterone
 - e. estradiol
23. An adult male has a heart beat of 76 beats per min his stroke volume is 100ml what is his cardiac output
- a. 100 l/min
 - b. 76 l/min
 - c. 760 l/min
 - d. 7.6 l/min
 - e. 10 l/min
24. During which phase of the cardiac cycle are all the four heart valves closed
- a. diastole
 - b. systole
 - c. isovolumic relaxation
 - d. both a and b
 - e. both b and c
25. The exchange of gases and nutrients between blood and tissues is a major function of:
- a. arterioles
 - b. arteries
 - c. capillaries
 - d. veins
 - e. venules
26. Which of the following body systems provides protection against disease and returns proteins and plasma to the cardiovascular system?
- a. respiratory
 - b. Urinary
 - c. endocrine
 - d. lymphatic
 - e. integumentary
27. Which of the following is classified as a monosaccharide?
- a. sucrose
 - b. glycogen
 - c. glucose
 - d. lactose
 - e. starch.
28. During isovolumetric ventricular contraction phase:

- a. The mitral and tricuspid valves are close causing second heart sound.
- b. The intraventricular pressure is increased without change in ventricular volume
- c. The atrioventricular valves bulge into the atria causing a drop in atrial pressure.
- d. QRS complex coincides with ventricular contraction.
- e. Both b and d

29. Atrial repolarization is expressed as :

- a. P wave
- b. QRS complex
- c. q wave
- d. T wave
- e. none of the above.

30. Which of the following cells is most directly responsible for protecting the stomach mucosa from attack by acid and proteolytic enzymes?

- a. gastric chief cells
- b. gastric parietal cells
- c. enteroendocrine cells
- d. Paneth cells
- e. gastric surface mucous cells

Section B

Answer all the questions

31. Describe the functions of both the hypothalamus and pituitary hormones and their negative feedback mechanism. 20mks

32. Describe the various components of the circulatory system. 20mks