



PAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY
FACULTY OF HEALTH, APPLIED SCIENCES AND NATURAL RESOURCES

DEPARTMENT OF HEALTH SCIENCES

QUALIFICATION: BACHELOR OF ENVIRONMENTAL HEALTH SCIENCES BACHELOR OF HEALTH INFORMATION SYSTEM MANAGEMENT BACHELOR OF HUMAN NUTRITION	
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DATE: JULY 2022	SESSION: 2 ND OPPORTUNITY
DURATION: 3 HOURS	MARKS: 100

SUPPLEMENTARY/ SECOND OPPORTUNITY EXAMINATION QUESTION PAPER	
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THIS QUESTION PAPER CONSISTS OF 7 PAGES (Including this front page)

SECTION A [50 MARKS]

QUESTION 1

[30 MARKS]

1. Evaluate the statements in each numbered section and select the most appropriate Answer or phrase from the given possibilities. Write the appropriate letter next to the number of the statement/phrase in the ANSWER BOOK. Each question carries **1 – mark**

- 1.1 The ribs are connected to the sternum by: [1]
a) Hyaline cartilage
b) Elastic cartilage
c) Dense regular connective tissue
- 1.2 The ureter: [1]
a) Receives fluid from the renal pelvis
b) Connects directly to the urethra
c) Is shorter in males than in females
- 1.3 The lining of blood vessels is made of: [1]
a) Simple squamous epithelium
b) Transitional epithelium
c) Simple columnar epithelium
- 1.4 Blood is prevented from backflowing INTO the right ventricle by the: [1]
a) Pulmonary semilunar valve
b) Aortic semilunar valve
c) Tricuspid valve
- 1.5 The 'gastric phase' of gastric secretion is triggered by the: [1]
a) Sight, thought or smell of food.
b) Entry of food into the stomach.
c) Entry of chyme into the small intestine.
- 1.6 The skull bones does not contain paranasal sinuses is: [1]
a) Ethmoid
b) Sphenoid
c) Zygomatic

- 1.7 Blood will have the SLOWEST velocity in: [1]
a) Capillaries
b) Venules
c) Superior vena cava
- 1.8 The two pubic bones are held together on the anterior surface by: [1]
a) Synovial joint
b) Diarthrotic joint
c) Symphysis joint
- 1.9 Saliva contains a digestive enzyme called: [1]
a) Trypsin
b) Bile
c) Amylase
- 1.10 Which hormones does the adrenal gland secrete? [1]
a) Epinephrine and norepinephrine
b) Insulin and glucagon
c) Insulin and epinephrine
- 1.11 What effect will increase the concentration of red cells in the blood have? It will: [1]
a) Decrease blood viscosity and increase aortic pressure
b) Increase blood viscosity and decrease aortic pressure
c) Increase blood viscosity and increase aortic pressure
- 1.12 Which of the following readings (in mm Hg) would be considered within a healthy resting blood pressure range? [1]
a) 115/70
b) 120/30
c) 100/90
- 1.13 Which hormone stimulates the release of bile and pancreatic juice? [1]
a) Cholecystokinin
b) Secretin
c) Intestinal gastrin
- 1.14 What is the name given to the process of moving the gut contents along the tract in the right direction? [1]
a) Peristalsis
b) Emesis
c) Segmentation

- 1.15 Which cell organelles contain an acidic environment capable of digesting a wide variety of molecules? [1]
- a) Lysosomes
 - b) Ribosomes
 - c) Centrosomes
- 1.16 Platelets play a part in: [1]
- a) Clotting
 - b) Cellular reproduction
 - c) The manufacture of white blood cells
- 1.17 How many lobes does the right lung consist of: [1]
- a) 2
 - b) 3
 - c) 1
- 1.18 The process, which divides the cytoplasm in half, is specifically termed: [1]
- a) Karyokinesis
 - b) Cytokinesis
 - c) Mitosis
- 1.19 The following molecules freely pass through a cell membrane except for which one: [1]
- a) Oxygen
 - b) Carbon dioxide
 - c) Amino acids
- 1.20 The tissue that has an appearance of clear plastic or glass is most likely: [1]
- a) Elastic cartilage
 - b) Fibrocartilage
 - c) Hyaline cartilage
- 1.21 A low sodium concentration of the filtrate in the distal convoluted tubule could indicate that: [1]
- a) Blood pressure is high
 - b) Blood volume is high
 - c) Blood volume is low
- 1.22 A condition that usually results in the absence of one or both testes in the scrotum is: [1]
- a) Menarche
 - b) Cryptorchidism
 - c) Spermatogenesis

- 1.23 White blood cells are important in: [1]
a) Increasing oxygen transport to the cells
b) Removal of carbon dioxide from the body tissues
c) Protecting the body from infections by foreign agents such as bacteria and viruses
- 1.24 In what body cavity is the gallbladder located? [1]
a) Pericardial cavity
b) Peritoneal cavity
c) Abdominal cavity
- 1.25 Which of the following processes is the first step in urine production? [1]
a) Micturition
b) Glomerular filtration
c) Tubular reabsorption
- 1.26 Which of the following structures is used to attach muscles to bones? [1]
a) Tendon
b) Cartilage
c) Ligaments
- 1.27 The coronary artery is a branch of the: [1]
a) Ascending aorta
b) Subclavian artery
c) Pulmonary artery
- 1.28 Heart contractions are triggered by: [1]
a) Left ventricle
b) Autorhythmic fibers
c) Coronary circulation.
- 1.29 A gallstone that blocked the common bile duct would cause the fat content of faeces to: [1]
a) Increase
b) Decrease
c) Stay the same
- 1.30 Which layer of the digestive tract is responsible for peristalsis? [1]
a) Mucosa
b) Submucosa
c) Muscularis

QUESTION 2

[20 MARKS]

2. Assess the following statements and decide whether they are **true or false**. Write only the number of the question and next to it indicate your answer as **true or false** in the ANSWER BOOK. 1 mark for each question.

- 2.1 The bulbourethral glands are found just superior to the prostate gland. [1]
- 2.2 Anorexia is a term that means loss of appetite. [1]
- 2.3 The mucous cells of the salivary glands secrete amylase which facilitates digestion of starches. [1]
- 2.4 In the average female ovulation occurs on day 21 of the menstrual cycle. [1]
- 2.5 T lymphocytes can be found in the bone marrow, spleen, blood, and tonsils as well as thymus gland. [1]
- 2.6 During ovulation, a secondary oocyte is ejected into the peritoneal cavity. [1]
- 2.7 A murmur is a heart sound heard when the valves do not close sufficiently. [1]
- 2.8 Cyanosis is the blue colour of white skin caused by the presence of oxyhemoglobin. [1]
- 2.9 Male sex hormones can be produced by the testes or adrenal glands. [1]
- 2.10 The pyloric region of the stomach is a major site of nutrient absorption. [1]
- 2.11 The ear wax cerumen contains compounds that repel insects. [1]
- 2.12 The myelencephalon becomes the medulla oblongata. [1]
- 2.13 Gray matter most significantly contains cell bodies and dendrites. [1]
- 2.14 The heart only contains cardiac muscle. [1]
- 2.15 Bile is produced by hepatocytes in the gallbladder. [1]
- 2.16 Liver lobules are capable of producing plasma proteins such as albumin. [1]
- 2.17 The esophagus is lined by keratinized stratified squamous epithelium. [1]
- 2.18 Mast cells secrete histamine. [1]
- 2.19 The renal artery enters the kidney at the renal hilus. [1]
- 2.20 A function of the ileocecal valve is to prevent backflow from the large intestine to the small intestine. [1]

SECTION B [20 MARKS]

QUESTION 3

[20 MARKS]

- 3.1 Draw a well-labeled diagram of the heart showing the circulation of blood through it. [5]
- 3.2 Write a short note on the pancreas. [5]
- 3.3 Discuss any five (5) functions of the kidney [5]
- 3.4 Describe the optical components of the eye. [5]

SECTION C [30 MARKS]

QUESTION 4

[30 MARKS]

- 4.1 Elaborate the physiology of urine formation. [15]
- 4.2 Outline the parts of the digestive system. [5]
- 4.3 Elaborate on the stomach under the following headings.
- 4.3.1 Position [2]
 - 4.3.2 Parts [2]
 - 4.3.3 Relations [5]
 - 4.3.4 Blood Supply [1]

GOOD LUCK!!!!