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DMI-ST. EUGENE UNIVERSITY

ZAMBIA

DEGREE EXAMINATION – JUNE 2024

Semester: III

357 BO 33 HUMAN PHYSIOLOGY I

Time: 3:00 Hours

Max. Marks: 100

Answer any FIVE Questions (5 x 20 = 100 Marks)

1. It is essential that every blood given to patients goes through a thorough check in the hematology lab.
 - a) Discuss the processes of safe blood transfusion. **(10 Marks)**
 - b) What foods would you advise a person who needs blood to eat? **(5 Marks)**
 - c) List 5 causes of anemia. **(5 Marks)**
2. Rudigar, a center back has been having shortness of breath of late. Carlo Ancelotti, His coach has since advised him to rest and not to participate in any games even though they are to play a UEFA champions league game.
 - a) Draw and label A sketch of the respiratory tract from the mouth to the terminal end. **(15 Marks)**
 - b) What is the normal respiratory rate of an adult human being at rest? **(5 Marks)**
3. You go visiting your auntie who is a farmer. Upon arrival, She hurts herself with a knife and you see your aunt bleeding. Less than a minute, she stops bleeding
 - a) Discuss the Intrinsic pathway of the coagulation cascade. **(10 Marks)**
 - b) Discuss 5 types of anemia you know. **(10 Marks)**
4. Imagine you're about to embark on a thrilling adventure. But instead of boarding a plane or a ship, this journey takes place right inside your own body! Our destination? The intricate and fascinating world of the digestive system—a place where the food you eat transforms into the nutrients your body needs to thrive.
 - a) Discuss the three parts of the small intestine and what nutrients are absorbed in which part? **(6 Marks)**

- b) What is the name of the part where the small intestine meets the large intestine? **(2 Marks)**
- c) List the parts of the large intestine. **(4 Marks)**
- d) Discuss the muscles that create the boundary of the abdomen in the following context: anterior wall, Inferior wall, posterior wall, superior and lateral walls. **(8 Marks)**
5. a) Raphaeno, a medical student, is studying the organization of the human body. During his anatomy class, his professor presents a case study of a patient who has suffered severe trauma to the abdomen in a car accident. Gill is tasked with understanding how the body is organized and how this organization relates to the patient's injuries.
- b) With the aid of a diagram, discuss the renin-angiotensin-aldosterone system. **(10 Marks)**
- c) Discuss comprehensively the function of cellular organelles. **(10 Marks)**
6. Just like the saying goes, what goes up must come down. The body uses up raw materials for metabolic processes and they end in excretion.
- a) Draw a schematic diagram of the female genital urinary system. **(15 Marks)**
- b) List the 5 layers of the epidermis. **(5 Marks)**
7. Musonda, a stricker says he develops problems breathing when it becomes cold. He also is allergic to some dust and pollen grains that produce the same type of asthma like symptoms
- a) How many lobes does the right lung have and list them? **(5 Marks)**
- b) What is the name of the cells in the alveoli that fight against infection? **(5 Marks)**
- c) What type of epithelium is found in the alveolar sacs of the respiratory system? **(5 Marks)**
- d) What is the type of epithelium found in the trachea? **(5 Marks)**