**All questions contribute to one grade for LO1 and one grade for LO3.**

**Questions** are not equally weighted.

**For achieving high grades, ensure you:**

**> Answer all parts of the questions**. Please write detailed paragraph answers to **all questions**.

**> Use at least one physiology textbook and one microbiology textbook** during your study**.**

**> Demonstrate understanding by writing answers in your own words,** and **paraphrasing** material from

textbooks.

**> Include intext citations and create an APA reference list** **page** at the end of your answers**.**

**Written Assessment 3 (WA3) Template**

**LO1 Physiology-** Relate knowledge of anatomy and physiology to the maintenance of normal health and function.

**The stimuli that produce the stress response are called stressors. If stress is extreme, it triggers the stress response called General Adaptation Syndrome (GAS), which occurs in three stages.**

1. **Explain** in detail the **alarm** and **resistance stages** of the General Adaptation Syndrome (GAS). Suggested word count: 360-400.

**Calcium is a mineral most often associated with healthy bones and teeth; it also plays an important role in many physiological processes.**

1. a. **Name** the **major physiological processes** in the human body dependent on the blood

calcium. Suggested word count: 25-30.

1. b. **Describe how blood** calcium concentration **is maintained** in case of **hypocalcemia,** as

well as in case of **hypercalcemia**. Suggested word count: 150-180.

1. c. **How** does **vitamin D influence blood concentration of calcium** in the human body?

Suggested word count: 10-12 (one sentence).

**Blood contains inactive clotting factors that are activated when injury to blood vessels/tissues occurs.**

1. **Describe the sequence of events involved in haemostasis.** Include the following concepts in your answer:

* Vascular spasm
* Platelet plug formation
* Blood clotting (coagulation). Start your answer on coagulation, at the beginning of the **common pathway after the formation of prothrombinase.**
* End your answer with a very brief comment on blood vessel repair.

Suggested word count: 500 words.

**All cells in the human body use oxygen (O2) and release carbon dioxide (CO2) as a product of metabolism, the body must get rid of CO2.**

**4. Describe** the **transport of oxygen** (O2) and **carbon dioxide** (CO2) in the human body. In your

answer include the **partial pressures** of O2 and CO2, **as well as** the **mechanisms** of transport

of both O2 and CO2. Suggested word count: 615.

**LO3 Liver structure and function and drug metabolism-** Apply knowledge of liver and kidney function to pharmacokinetics.

**Like all portal systems in the human body, the hepatic portal system is composed of two capillary beds linked by the blood vessel.**

1. **Describe** the **hepatic portal system**. Suggested word count: 160-200.

**The portal triad is situated at each of the 6 corners of the liver lobule.**

1. **Identify** the **3 vessels** that constitute the portal triad. **Outline** their **origin** and the **nature of fluid** that they carry. Suggested word count: 100-120.

**One of the liver functions is the processing of medicines.**

1. **Explain how** the liver metabolises medicines **(phase I and phase II metabolism).**

Suggested word count: 60-80.

**Paracetamol is a widely used non-prescription drug with analgesic and antipyretic properties.**

1. **Discuss**the **metabolism of oral paracetamol**. Include in your answer **how paracetamol overdose affects the liver.**Suggested word count: 100-120.