

**PHYSIOLOGY PROGRAM**  
**COLLEGE OF HEALTH SCIENCES**  
**BOWEN UNIVERSITY IWO**  
**OSUN STATE, NIGERIA**  
**400 LEVEL PHYSIOLOGY EXAMINATION**  
**PHS 421: COMPARATIVE AND ENVIRONMENTAL PHYSIOLOGY**  
**(1<sup>st</sup> SEMESTER, 2022/2023 SESSION)**

**Allocated Time:** 3:00 hours

**Venue:** COHES Red Hall

**Date:** February 10th, 2023

**Instruction:** Attempt ALL questions. *Each section should be attempted on the same booklet.* Ensure that your matriculation number is well written on the pages of your answer booklet(s).

**SECTION A**

- 1.) Explain the physiological mechanism of space motion sickness. **(20 marks)**
- 2.) How will the hypothalamus respond to an environment that makes 33 °C the core body temperature? **(10 marks)**

**SECTION B**

- 3.) Some animals see by means of echolocation. Briefly explain. **(10 marks)**
- 4.) Discuss the importance of circadian rhythm to the survival of an organism. **(20 marks)**
- 5.) Provide a physiological explanation for how a Nigerian gets adapted to another time zone, like in the United States of America. **(10 marks)**