

**BOWEN UNIVERSITY, IWO**  
COLLEGE OF HEALTH SCIENCES  
**PHYSIOLOGY PROGRAMME**  
2023/2024 FIRST SEMESTER EXAMINATION  
PHS 405 (ENERGY AND METABOLISM)

**Date:** February 1st, 2024

**Allocated Time:** 3 Hours

**Instruction:** Attempt all questions. Ensure that your matriculation number is boldly written on each page of your answer booklet.

1. ) *“Skin is an essential thermo-regulatory organ of the human body”*.  
Discuss. **(20 marks)**

2. ) Briefly describe how clinical conditions affect energy balance and metabolism in the body **(10 marks)**

3. ) Briefly explain how environmental factors can influence skin’s temperature regulation **(10 marks)**

4. ) Write an essay on hepatic liberation of energy from macro-nutrients. **(20 marks)**

5. ) Briefly describe the composition of an energy balance system. **(10 marks)**