

PHYSIOLOGY PROGRAM
COLLEGE OF HEALTH SCIENCES
BOWEN UNIVERSITY IWO
OSUN STATE, NIGERIA
400 LEVEL PHYSIOLOGY EXAMINATION
PHS 405: ENERGY BALANCE AND METABOLISM
(1st SEMESTER, 2022/2023 SESSION)

Allocated Time: 3:00 hours

Venue: COHES Blue Hall

Date: February 16th, 2023

Instruction: Attempt ALL questions. Ensure that your matriculation number is well written on the pages of your answer booklet(s).

- 1.) Describe how the liver helps to liberate energy from macronutrients.
(20 marks)

- 2.) Body temperature must be kept within a fairly constant physiological range for the optimal functioning of body cells. Discuss this physiological process.
(20 marks)

- 3.) Briefly explain the factors that make up the energy balance system. **(10 marks)**

- 4.) The melanocortin pathway is critical for energy expenditure. What does this mean?
(10 marks)

- 5.) Explain the role of dietary fibres and energy density of food in satiety.
(10 marks)