



TECHNICAL UNIVERSITY OF MOMBASA

School of Applied and Health Sciences
DEPARTMENT OF PURE AND APPLIED SCIENCES

UNIVERSITY EXAMINATION FOR:

BACHELOR OF SCIENCE IN BIOCHEMISTRY

ABC 4305: BIOCHEMISTRY OF SPECIAL ORGANS

END OF SEMESTER EXAMINATION

SERIES: JULY 2025 SERIES

TIME: 2 HOURS

DATE: JULY 2025

Instructions to Candidates

You should have the following for this examination

Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

Question One (30 Marks)

- (i) With examples explain how drugs cause hepatotoxicity (4 Marks)
- (ii) List four common reactions catalyzed by cytochrome P450 (4 Marks)
- (iii) Differentiate between acute and chronic pancreatitis (2 marks)
- (iv) Explain the functions of any two secretions from small intestines (4 Marks)
- (v) Explain four functions of the kidney (4 Marks)
- (vi) Explain the aspects evaluated through of pulmonary function tests (3 Marks)
- (vii) Explain the function of pancreatic enzymes in the digestion and absorption of fats (4 Marks)
- (viii) With examples differentiate between primary and secondary skin infections (5 Marks)

Question Two (20 Marks)

- (i) Discuss the functions of the liver (10 Marks)
- (ii) Discuss the tests used to determine carbohydrates malabsorption (10 Marks)

Question Three (20 Marks)

Describe the major renal function tests (20 marks)

Question Four (20 Marks)

- (i) Discuss the significances of pulmonary function tests (10 mark)
- (ii) Describe various types of lung volumes and capacities in pulmonary function tests (10 Marks)

Question Five (20 Marks)

- (i) Outline the major events involved in food digestion and absorption (6 Marks)
- (ii) Discuss the process of fat digestion and absorption (6 Marks)
- (iii) Discuss the organization of the nervous system (8 Marks)