

BINDURA UNIVERSITY OF SCIENCE EDUCATION
BIOLOGICAL SCIENCES DEPARTMENT
BACHELOR OF SCIENCE HONOURS DEGREE IN NURSING SCIENCE
APPLIED BIOCHEMISTRY (NS102/NE102)

EXAMINATION

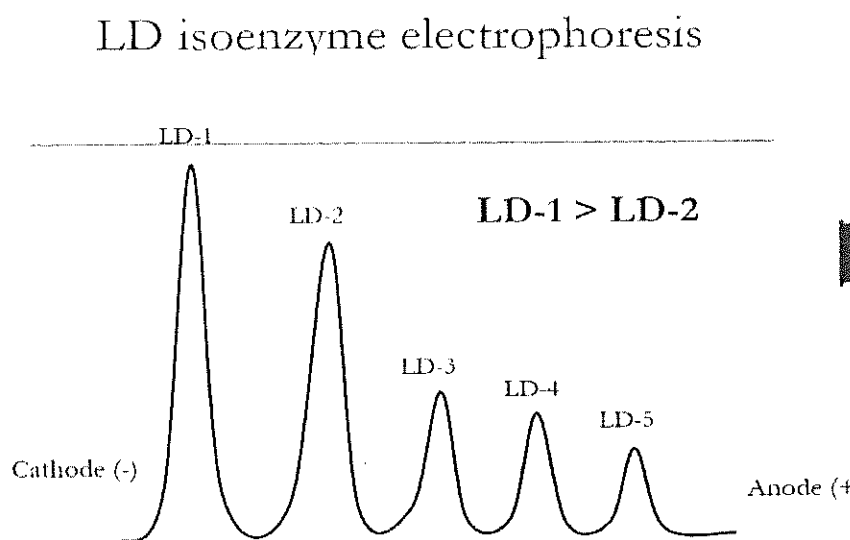
2 HOURS (100 MARKS)

INSTRUCTIONS

Answer **FOUR** (4) questions. You **MUST** answer **QUESTION 1** from Section A and any **THREE** (3) questions from SECTION B. Each question carries 25 marks. Where a question contains subdivisions, the mark value of each part is given in brackets. Illustrate your answer where appropriate with large clearly labelled diagrams. You should not spend more than 30 minutes on each question.

SECTION A (COMPULSORY)

1. (a) Describe three (3) similarities and differences between unsaturated and saturated fatty acids. [6]
- (b) Explain the biochemical and chemical parameters used for liver toxicity. [8]
- (c) Discuss the urinary indicators of kidney malfunctions. [6]
- (d) Explain the physiological situation due to the enzyme profiles depicted in the electrophoretic diagram below: [5]



SECTION B. Choose any THREE (3) from FIVE (5) questions below.

2. Describe the different types of porphyria conditions and how they manifest in the body. [25]
3. Describe the process of glycogen metabolism and the disorders associated with the biochemical pathways involved. [25]
4. Write notes on the transcription of DNA. [25]
5. Give an account of the protein translation from an mRNA. [25]
6. Give an outline of the phenylalanine metabolism and its possible disorders. [25]

END OF EXAMINATION PAPER