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University Examinations 2022/2023

SECOND YEAR FIRST SEMESTER SPECIAL/SUPPLEMENTARY EXAMINATION FOR
THE DEGREE OF BACHELOR OF SCIENCE IN BIOCHEMISTRY

SHC 3202: BASIC METABOLISM I

DATE: AUGUST 2023

TIME: 2 HOURS

INSTRUCTIONS: Answer question *one* and any other *two* questions

QUESTION ONE (30 MARKS)

- a) Explain why glucose is an indispensable metabolism (4 marks)
- b) Outline the physiological role of NADPH (4 marks)
- c) Explain the signalling effects of nitric oxide (3 marks)
- d) Describe how lipoprotein lipase extracts triacylglycerol from chylomicrons (4 marks)
- e) Outline the acetyl-COA carbohydrates reaction (3 marks)
- f) Write short notes on functional stage in the respiratory chain (4 marks)
- g) Explain the liver glycogen utilization (2 marks)
- h) Outline the glycogen storage diseases (2 marks)

QUESTION TWO (20 MARKS)

Outline the TCA cycles and the enzymes involved (20 marks)



MUST is ISO 9001:2015 and



ISO/IEC 27001:2013 CERTIFIED

QUESTION THREE (20 MARKS)

Discuss how acetone can serve as a precursor for gluconeogenesis (20 marks)

QUESTION FOUR (20 MARKS)

Discuss the molecule in electron transport chain (20 marks)

