

CHUKA



UNIVERSITY

UNIVERSITY SUPPLEMENTARY/SPECIAL EXAMINATIONS.

THIRD YEAR EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN BIOCHEMISTRY.

BIOC 401: SPECIAL METABOLISM

STREAMS: BIOC

TIME: 2 HOURS

DAY/DATE: THURSDAY 13/09/2018

8.30 A.M -10.30 A.M

INSTRUCTIONS

- Answer All the Questions
- Do not write on the question paper

QUESTION ONE - [30 MARKS]

- (a) Discuss the structure and functions of flagella axoneme. [5 Marks]
- (b) Using structural and chemical formulae describe **heme** catabolism in the spleen. [9 Marks]
- (c) Describe energy metabolism during cardiac muscle contraction. [8 Marks]
- (d) Discuss role of Calcium ions in the regulation of phototransduction cascade. [8 Marks]

QUESTION TWO - [20 MARKS]

- (a) Discuss the mode of action and physiological role of G-protein coupled receptors. [10 Marks]
- (b) List all the serotonin receptor subtypes and explain their role in serotonergic transmission. [10 Marks]

QUESTION THREE - [20 MARKS]

- (a) Discuss biochemical basis of hepaticjaundice. [9 Marks]
- (b) Explain the rationale and application of phototherapy in newborns. [11 Marks]
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