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CHUKA



UNIVERSITY

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UNIVERSITY EXAMINATIONS

FOURTH YEAR EXAMINATION FOR THE AWARD OF BACHELOR OF SCIENCE  
IN BIOCHEMISTRY

BIOC 450: CLINICAL PATHOLOGY

STREAMS: BSc (BIOC) Y4S2  
HOURS

TIME: 2

DAY/DATE: MONDAY 15/4/2019  
P.M. - 4.30 P.M.

2.30

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INSTRUCTIONS:

- i. Answer question one and any other two questions
- ii. Do not write on the question paper

QUESTION ONE (30 MARKS)

- a) Give normal reference ranges for the following parameters explaining relevance in clinical diagnosis

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- (5 marks)
- i. Specific gravity
  - ii. Osmolality
  - iii. pH
  - iv. Glucose
  - v. Proteins
- b) What are the likely effects of overproduction of cerebrospinal fluid?  
(4 marks)
- c) Outline tests that may help in ascertaining protein absorption problems in a person suffering from malabsorption syndrome (MAS)  
(4 marks)
- d) Critically explain why trephine biopsy is preferable to bone marrow aspiration during bone marrow examination  
(3 marks)
- e) Compare and contrast creatinine clearance and urea clearance tests  
(4 marks)
- f) Describe tests that can be used to screen for fibrinogen deficiency  
(5 marks)
- g) Describe test for urobilinogen in Feces (5 marks)

### QUESTION TWO

- a) Illustrate the simplest diagnostic tests for renal function  
(10 marks)
- b) Describe spectrophotometric methods used to determine bilirubin in tissue specimen  
(10 marks)

### QUESTION THREE

- a) Formulate tests and their probable findings that could suggest that a person is manifest of Hemophilia A  
(10 marks)
- b) Describe tests for detection of ketones in urine  
(10 marks)

### QUESTION FOUR

- a) Discuss how serum aspartate aminotransferases is important in investigating liver diseases  
(10 marks)

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- b) Describe test principles and clinical relevance of total cholesterol and triglycerides in blood  
(10 marks)
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