ELIZADE UNIVERSITY

ILARA-MOKIN

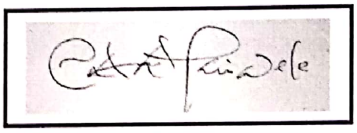
ONDO STATE

FACULTY: Basic and Applied Sciences
DEPARTMENT: Physical and Chemical Sciences
FIRST SEMESTER EXAMINATIONS
2019/2020 ACADEMIC SESSION

COURSE CODE: BCH 301

COURSE TITLE: NUTRITIONAL BIOCHEMISTRY

DURATION: 2.5 HOURS



HOD's SIGNATURE

TOTAL MARKS:

Matriculation Number: _____

INSTRUCTIONS:

1. Write your matriculation number in the space provided above and also on the cover page of the exam booklet.
2. This question paper consists of 1 page with printing on both sides.
3. Answer all questions in the exam booklet provided.
4. More marks are awarded for problem solving method used to solving problems than for the final numerical answer.
5. Box your final answers. Marks will be deducted for untidy work.
6. At the end of this examination, place the question paper inside the exam booklet.
7. Answer two [2] questions in each section
8. Answer each section in separate booklet.

ELIZADE UNIVERSITY, ILARA-MOKIN
FACULTY OF BASIC AND APPLIED SCIENCES,
DEPARTMENT OF PHYSICAL AND CHEMICAL SCIENCES
BIOCHEMISTRY OPTION
FIRST SEMESTER EXAMINATION
COURSE: BCH 301 (NUTRITIONAL BIOCHEMISTRY).
TIME ALLOWED: 150 MINS

1. **Instruction**: Answer two [2] questions in each section

SECTION A

(1a) Briefly describe the following terms:
- (i) Energy value ..... (2 marks)
- (ii) Nutritional status ..... (2 marks)
- (iii) Body Mass Index ..... (2 marks)
- (iv) Basal Metabolic Rate ..... (2 marks)
- (v) Mycotoxins ..... (2 marks)

(1b) Calculate the energy value and percentage of total energy intake for each nutrient in a wrap of fufu, if the wrap contains 352g of carbohydrate, 105g of fat and 42g of protein ..... (5 marks)

(2) Inhibition of the action of enzymes like [i] acetylcholinesterase, [ii] angiotensin-1 converting enzyme and [iii] α-glucosidase enzyme is adjudged a useful approach in the management of some degenerative diseases. Identify the disease linked with each of the enzymes above and Describe how a named functional food could be useful in their management ..... (15 marks)

(3a) Describe any five (5) methods of preserving food ..... (5 marks)
(3b) In a tabular form state the functions, deficiency and sources of Vitamins A, B, C, D and E ... (10 marks)

SECTION B

(4) (a) Describe the role of Vitamin K in blood coagulation ..... (6 marks)
(b) Distinguish between; (i) Cofactor (ii) Coenzyme and (iii) Prosthetic group ..... (9 marks)

(5) Write an essay on:
- (a) Mucopolysaccharides ..... (7 marks)
- (b) Essentiality of amino acids .... (8 marks)

(6) Write short notes on any **five (5)** of the following:
- (a) Malnutrition ... (3 marks)
- (b) Fat-soluble vitamins ... (3 marks)
- (c) Protein in human nutrition ... (3 marks)
- (d) Methods of assessing protein quality ... (3 marks)
- (e) Energy metabolism ... (3 marks)
- (f) Dietary fibre ... (3 marks)
- (g) Kwashiorkor ... (3 marks)