

**TECHNICAL UNIVERSITY OF MOMBASA**  
**FACULTY OF APPLIED AND HEALTH SCIENCES**  
**DEPARTMENT OF ENVIRONMENT & HEALTH SCIENCES**  
**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF**  
**SCIENCE IN COMMUNITY HEALTH**

**BSCH 13J/YEAR4/ SEMESTER1**

**APH 4409: NUTRACUETICALS AND FOOD**  
**SUPPLEMENTS**

**SEMESTER EXAMINATION**

**SERIES: APRIL/MAY 2016**

**TIME: 2 HOURS**

*Instructions to Candidates*

This paper consists of FIVE questions

Answer question ONE (COMPULSORY) and any other TWO questions.

*This paper consists of two printed pages.*

QUESTION ONE

- 1.a) Explain the term functional foods 4marks
- b) Expound on two reasons why food has to be fortified 4marks
- c) Expound on legumes use as nutraceuticals 4marks
- d) Vitamin B1 is one of the vitamins used as a dietary supplement. Explain two functions of vitamin B1 that consumers look forward to getting in their body. **4marks**
- e) Consumption of cashewnut is beneficial to the individual since they benefit from magnesium, vitaminb1 and vitamin b2 and among other others. Outline two symptoms of magnesium deficiency. **4marks**

f) Wanja is your client she suffers from intestinal disorders and coronary heart disease such as angina, myocardial infarction, arrhythmia and at times heart failure threatens her she has been advised by her colleague to take the banana fruit. Explain to her two vitamins that are found in bananas and two minerals she will benefit from after consuming a ripe banana. 4marks

g) Explain three functions of vitamin D in the body which clients benefits from when it is given as a supplement. **6marks**

## Section B

### QUESTION TWO

2.a) Carol is a nurse working in Porkotio hospital she has noticed a high prevalence of type 2- diabetes in her patients, she then comes to you for advice on how to reduce the rate of the disease naturally. Discuss with her four natural ways of controlling type 2- diabetes. 12marks

b) Discuss to your colleague four natural food used in manufacturing of commercial nutraceuticals in the U.S. and their functions to human body. 8marks

### QUESTION THREE

3 a) Discuss with your client traditional nutraceuticals and give her one example of traditional nutraceuticals and its function 10marks

b) Explain two functional foods that can be eaten to help relieve constipation 10marks

### QUESTION FOUR

4a) Discuss three factors that affect minerals bioavailability 10marks

b) When doing food supplement vitamin A is one of the vitamins used. Explain two functions of vitamin A and four food sources of vitamin A. 10marks

### QUESTION FIVE

5.a)Discuss commercial nutraceuticals and why companies are getting interested in manufacturing them 10 marks

b) Faith is a doctor in the hospital where you work and is treating a patient who requires therapeutic foods. Explain to her what therapeutic diets are and two factors you are going to consider when planning for diet of that patient. 10marks