

2ND SEM. 2018/19

UNIVERSITY OF ESWATINI



FINAL EXAMINATION PAPER

PROGRAMME: BACHELOR OF SCIENCE IN FOOD SCIENCE, NUTRITION AND TECHNOLOGY

COURSE CODE: FSNT411/FNS409

TITLE OF PAPER: FUNCTIONAL FOODS AND DIET SUPPLEMENTS

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER QUESTION ONE (1) AND ANY OTHER TWO (2) QUESTIONS.

DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN GRANTED BY THE CHIEF INVIGILATOR.

QUESTION 1 (COMPULSORY)

(a) Fill-in the correct word(s)/phrase(s). Write your answer on the answer sheet. DO NOT write the whole sentence/phrase. e.g. a) 1. Excess fat

- i. _____ aims at establishing intake of as many food components as possible to support or promote well-being and health, and/or reduce the risk of diseases, mainly for those that are diet-related.
- ii. _____ are foods where the effect of such an addition or removal has been scientifically evaluated, and permission has been granted to make claims regarding the specific beneficial effects on health expected from their consumption.
- iii. The design and development of functional foods is a key issue, as well as a scientific challenge, which should rely on basic _____ relevant to target functions and their possible modulation by food components.
- iv. A food may either be naturally high in fibre such as whole meal bread, or have fibre added such as high-fibre white bread. A point of difference is that high-fibre foods do not always contain all the _____.
- v. Yogurt containing _____ is a good synergistic fit and a true functional food.

(5x2=10 Marks)

(b) Studies with aseptically grown animals have provided insight into the physiological significance of the intestinal flora. Discuss the effects of intestinal flora on the GI tract.

(5x2=10 Marks)

(c) Discuss the **six (6)** features of functional foods as outlined by the EU functional food consensus developed early 1996.

(6x2=12 Marks)

(d) Describe the **two (2)** types of fibers and give food examples for each.

(2x4=8 Marks)

[TOTAL MARKS=40]

QUESTION 2

- (a) Discuss the differences between food fortification and enrichment and give examples of food sources for each.

(2x3=6 Marks)

- (b) Tea is a herb that is known for health promoting properties due to its richness in antioxidants. Discuss the therapeutic effects of consuming tea.

(6x4=24 Marks)

[TOTAL MARKS=30]

QUESTION 3

- (a) Decreasing and prevention of obesity has become a major public health target. In an attempt to improve nutritional health, numerous fat-based food products have been developed in food industry over the past decades. List and describe the different types of functional spreads.

(3x5=15 Marks)

- (b) Define the following terms and give examples of food products for each.

- i. Probiotic
- ii. Prebiotics
- iii. Synbiotic

(3x5=15 Marks)

[TOTAL MARKS=30]

QUESTION 4

- (a) Define and provide detailed information on the following phytochemicals. Please provide detailed information on their food sources, benefits, and biological function.

- i. Polyphenols
- ii. Isoflavones

- iii. Phytosterols
- iv. Carotenoids
- v. Flavonoids

(5x6=30 Marks)

[TOTAL MARKS=30]
