



**1<sup>ST</sup> SEM. 2020/21**

**PAGE 1 OF 3**

**UNIVERSITY OF ESWATINI**

**SPECIAL ASSESSMENT PAPER**

**PROGRAMME : FOOD SCIENCE, NUTRITION AND TECHNOLOGY YEAR III**

**COURSE CODE : FNS305**

**TITLE OF PAPER : PRODUCT DEVELOPMENT AND FORTIFICATION**

**TIME ALLOWED : TWO (2) HOURS**

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

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**QUESTION 1 (COMPULSORY)**

- a) Explain the term ‘food fortification’. (4 Marks)
- b) Discuss the following in fortification technology:
  - i. Dry mixing
  - ii. Spraying
  - iii. Addition
  - iv. Coating(10 Marks)
- c) Discuss **two (2)** limitations of fortification (6 Marks)
- d) Explain the steps you followed when performing market research for your new product in your term project. (20 Marks)

[TOTAL MARKS = 40]

**QUESTION 2**

Discuss **three (3)** advantages and **two (2)** disadvantages of each of the following:

- i. Product-oriented food product development [15 Marks]
- ii. Customer-oriented food product development [15 Marks]

(30 Marks)

[TOTAL MARKS = 30]

**QUESTION 3**

- a) State **five (5)** significant nutrients for fortification and justify why each one is important to include in our diets. (15 Marks)
- b) In trying to develop your own new product:
  - i. Which questions did you ask in screening your idea?
  - ii. What challenges did you face while developing the product?(15 Marks)

[TOTAL MARKS = 30]

**QUESTION 4**

- a) Discuss the **three (3)** objectives of fortification of food. (15 Marks)
- b) Describe **five (5)** categories of new product development. (10 Marks)
- c) Discuss **two (2)** technologies that are applicable in fortification technology. (5 Marks)

**[TOTAL MARKS = 30]**