



**1<sup>nd</sup> SEM. 2017/18**

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**UNIVERSITY OF SWAZILAND**

**FINAL EXAMINATION 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) Differentiate between enrichment and restoration. (4 Marks)
- b) Using illustrations explain the stages of a product life-cycle. (20 Marks)
- c) Describe the **three (3)** essentials of new product development. (6 Marks)
- d) Discuss the following in fortification technology: (10 Marks)
- i. Dry mixing
  - ii. Spraying
  - iii. Addition
  - iv. Coating

[TOTAL MARKS = 40]

**QUESTION 2**

- a) Explain the difference between product-oriented food product development and market-oriented food product development. (20 Marks)
- a) Using **five (5)** points, describe the criteria when selecting a vehicle for food fortification. (10 Marks)

[TOTAL MARKS = 30]

**QUESTION 3**

Discuss the steps you followed in developing your own new product. (30 Marks)

[TOTAL MARKS = 30]

**QUESTION 4**

- b) Discuss **two (2)** limitations of fortification  
(5 Marks)
- c) Explain **five (5)** advantages of fortification  
(15 Marks)
- d) Using **five (5)** points, justify the importance of performing market research in new product development.  
(10 Marks)

[TOTAL MARKS = 30]