



**NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
SCHOOL OF AGRICULTURAL SCIENCES
SEPTEMBER/OCTOBER 2015 EXAMINATION**

COURSE CODE: HCM 339

COURSE TITLE: Food and Beverage Production III

TIME ALLOWED: 2 hours

Instructions: 1. Attempt question Number one (1) and any other two (2) questions

2. Question number 1 is compulsory and carries 30 marks while the

other questions carry 20 marks each.

3. Present all your points in coherent and orderly manner

QUESTION ONE

A. Define the following terms:

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|------------------|------|
| i. Heat transfer | 5mks |
| ii. Conduction | 5mks |
| iii. Radiation | 5mks |

B. Analyse the effects of heat on the following nutrients:

- | | |
|-------------------------------------|-------|
| i. Proteins | 3mks |
| ii. Starches | 3mks |
| iii. Sugars | 3mks |
| iv. Fats | 3 mks |
| v. Classify cooking methods into 3. | 3mks |
| vi. | |

QUESTION TWO

- | | |
|--|-------|
| A. Describe the 3 different types of grilling | 12mks |
| B. State 4 advantages of grilling | 4mks |
| C. Outline the temperature and time control while roasting | 4mks |

QUESTION THREE

Explain the following:

- | | | |
|------|--|------|
| i. | `Shallow frying | 5mks |
| ii. | Effects of shallow frying | 3mks |
| iii. | Three (3) advantages of shallow frying | 3mks |
| iv. | Identify the smoking points of the underlisted : | |
| | a. coconut oil | 1mk |
| | b. vegetable oil | 1mk |
| | c. olive oil | 1mk |
| | d. whole butter | 1mk |
| B. | Mention 5 varieties of vegetable oil used in deep fat frying | 5mks |

QUESTION FOUR

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|----|---|-------|
| A. | What is steaming? | 5mks |
| B. | Differentiate the main methods of steaming | 10mks |
| C. | Identify 5 ways to determine the tenderness of meat | 5mks |

QUESTION FIVE

- | | | |
|----|--|-------|
| A. | Describe 10 things you need to note when buying and storing fish | 10mks |
| B. | Compare and contrast: | |
| | i. Pop corn | 5mks |
| | ii. Sweet corn | 5mks |