



NATIONAL OPEN UNIVERSITY OF NIGERIA

University Village, Nnamdi Azikiwe Expressway, Plot 91, Cadastral Zone, Jabi, Abuja

Faculty of Agricultural Sciences, Dept. of Agricultural Economics and Extension,

PoP Examination Questions, SEPTEMBER, 2020_1

Course Title: Advanced Food and Beverage Production

Course Code: HCM 431

Credit Unit: 2 Units

Total Score: 70 Marks

Time Allowed: 2 Hours

INSTRUCTION: Answer compulsory question 1 (25 marks) and any other 3 questions (15 marks each).

- 1a) State the effect of spoilage on food commodities (4marks)
 - b) State Reasons for Keeping Food Commodities from Spoilage (4marks)
 - c) How to Reduce Spoilage in a Restaurant (4marks)
 - d) List the Products of Microbial Growth (3marks)
 - e) Highlight 10 Commonly Occurring Microbial Spoilage (10marks)
- 2) Explain the following Methods of Food Preservation
- a) Refrigeration (5marks)
 - b) Pickling (5marks)
 - c) Sugaring (3marks)
 - d) Smoking (2marks)
- 3) Write short notes on:
- a) Viruses
 - b) Fungi
 - c) Growth pattern of bacteria(15marks)
- 4 a) List the different phases of microbial growth (5marks)
- b) Write short note on the listed phases of microbial growth (10marks)
- 5a) briefly explain 5classes of Microorganism based on their temperature Requirement. (10 marks)
- b) Briefly explain the Conditions Influencing the Effectiveness of Antimicrobial Agents (5marks)
- 6a) State reasons for the Control of Microorganisms growth (3marks)
- b) Explain the Control methods to be used of microorganism (3marks)
- c) State different methods of controlling microorganisms by dry heat (3marks)
- 6d) State different antimicrobial agents used in food factories (6marks)