



FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SCHOOL OF NATURAL AND APPLIED SCIENCES
DEPARTMENT OF MICROBIOLOGY

FIRST SEMESTER EXAMINATION 2013/2014 SESSION

COURSE CODE: MCB412 (3 CREDITS)

COURSE TITLE: FOOD MICROBIOLOGY

CLASS: 400 LEVEL

TIME ALLOWED: 2hrs. 30min

INSTRUCTION: Answer any **five** questions.

1. In a recent food borne outbreak, the following results were obtained. Carefully read and complete the Table.

Type of Food	No. of people who ate and were ill	No. of people who ate and were not ill	Total number of people	% of people who ate the food and were ill	No. of people who didn't eat but were ill	No. of people who didn't eat and were not ill	Total no. of people	% of people who didn't eat but were ill
Baked Beans	68	23			12	41		
Yam pottage	45	39			35	25		
Roasted suya	55	33			25	31		
Moi-Moi	33	34			49	30		

NOTE: Symptoms (which include difficulty in swallowing, speaking and breathing, respiratory paralysis, dry mouth and general weakness) started after 24 hours and lasted for 6 days. From this information;

- i. What is the etiologic agent?
 - ii. Is this food infection or intoxication phenomenon?
 - iii. What is the target site of the agent or its metabolite?
 - iv. Which of the foods is implicated?
 - v. What factors favour the development of the agent?
- 2(a). Distinguish with examples, between Food borne infection and food borne intoxication
- 2(b). How can food borne diseases be controlled?
- 3(a). Enumerate the properties of bacteria that make them important in food.
- 3(b). (i). What are aflatoxins?
- (ii). List any six other fungal metabolites implicated in poisoning
- 4(a). What factors make Family Pseudomonadaceae important in food?
- 4(b). Distinguish between film and osmophilic yeasts with examples.
5. Write short notes on any two of the following:
- i. Antimicrobial substances in food
 - ii. interrelationship amongst microorganisms
 - iii. Histamine Food poisoning
- 6(a).. How can water activity of food be exploited in combating spoilage?
- 6(b).. What are your responsibilities as a microbiologist in a food processing industry?
- 7(a). How can Bacillus Food poisoning be reduced if not eliminated?
- 7(b).. Describe the food poisoning phenomenon due to *Staphylococcus aureus*.