



MACHAKOS INSTITUTE OF TECHNOLOGY

MACHAKOS TOWN CAMPUS

SCHOOL OF HEALTH AND APPLIED SCIENCES

DIPLOMA IN NUTRITION AND DIETETICS MANAGEMENT

END OF SEMESTER EXAMINATIONS

JAN-APRIL 2021

FOOD SCIENCE AND TECHNOLOGY

KNEC 2426/301

INSTRUCTIONS TO CANDIDATES

1. Answer **ALL** questions in section A and **ANY** three in section B
2. Any examination **IRREGULARITY** will lead to **DISQUALIFICATION**.
3. Indicate your **FULL ADMISSION NUMBER** in each Answer Sheet used.
4. **DOT NOT** write your **NAME** anywhere on the answer booklet.
5. Cell phones are **NOT** allowed in the examination room.
6. Ensure you have both **SCHOOL ID CARD** and examination card in the examination room.

SECTION A (40 MARKS)

1. Define the term 'pasteurization' (2mks)
2. State the main elements that constitute carbohydrates (2mks)
3. List any six natural constituents of milk (6mks)
4. State three methods for reducing water activity in food (3mks)
5. State two advantages and two disadvantages of food preservation by freezing (4mks)
6. Name the components of milk and state the average percentage in each case (4mks)
7. State the role of the following ingredients in bread manufacturing (4mks)
 - i. Yeast
 - ii. Salt
8. Describe two ways by which fermentation reduces lactose intolerance (4mks)
9. List four types of anti-nutrients in food (4mks)
10. Distinguish between food spoilage and food poisoning (4mks)
11. Explain four preventive measures against salmonellosis food poisoning (3mks)

SECTION B (60 MARKS)

12. (a). Define the term fermentation (2mks)
 - (b). Explain four advantages of fermentation in food processing (8mks)
 - (c). Explain the effects of each of the following on the rates of bacteria:
 - i. pH (2mks)
 - ii. Temperature (3mks)
 - (d). Discuss the role of salt in bread making (5mks)
13. (a). Describe any FOUR methods of food preservation (8mks)
 - (b). Discuss the role of food science and technology in nutrition (12mks)
14. Discuss the benefits of food packaging (20mks)

15. Discuss the branches of food science

(20mks)

16. Explain the classification of carbohydrates

(20mks)