

# KENYA CERTIFICATE OF BASIC EDUCATION (K.C.B.E)

## MARKING SCHEME

### GRADE 10: HOMESCIENCE – TERM 1 – JANUARY 2026

#### SECTION A: (35 Marks)

##### 1. Basic concepts in Foods and Nutrition

###### a) Define nutrition. (2 marks)

- ✓ Nutrition is the process by which living organisms take in and utilize food for growth, repair, and energy.
- ✓ It involves the consumption, digestion, absorption, and metabolism of food substances.

###### b) Define nutrients. (2 marks)

- ✓ Nutrients are chemical substances found in food that are essential for the body's growth, repair, and maintenance.
- ✓ They include proteins, carbohydrates, fats, vitamins, minerals, and water.

###### c) Mention three examples of nutrients.

- i. Carbohydrates
- ii. Proteins
- iii. Fats
- iv. Vitamins
- v. Minerals
- vi. Water

###### d) Name any two food groups.

- i. Carbohydrate-rich foods (e.g., rice, maize, potatoes)
- ii. Protein-rich foods (e.g., meat, fish, beans, eggs)
- iii. Fat-rich foods (e.g., oils, butter, nuts)
- iv. Fruits and vegetables
- v. Dairy products

##### 2. Importance of Food and Nutrition to Mary (4 marks)

- i. Provides energy for concentration, learning, and physical activities.
- ii. Promotes proper growth and development.
- iii. Strengthens the immune system to fight diseases.
- iv. Helps in maintaining a healthy body weight and mental alertness.

##### 3. Careers related to Foods and Nutrition (3 marks)

- i. Dietician/Nutritionist
- ii. Food Scientist
- iii. Chef / Culinary Artist
- iv. Public Health Officer
- v. Food Technologist
- vi. Catering Manager



**4. Types of kitchen layouts (3 marks)**

- i. Single-line (one-wall) kitchen
- ii. L-shaped kitchen
- iii. U-shaped kitchen
- iv. Island kitchen
- v. Parallel / Corridor kitchen

**5. Materials used to make kitchen tools and equipment (4 marks)**

- i. Stainless steel
- ii. Aluminum
- iii. Copper
- iv. Plastic
- v. Wood
- vi. Glass
- vii. Ceramic

**6. Kitchen tools or equipment (3 marks)**

- i. Knife
- ii. Peeler
- iii. Cutting board
- iv. Saucepan / Pot
- v. Frying pan
- vi. Whisk / Spatula
- vii. Oven

**7. Ways of caring for kitchen tools and equipment (3 marks)**

- i. Clean after every use to prevent rust and contamination.
- ii. Store properly in dry places to avoid damage.
- iii. Sharpen knives and maintain utensils regularly.
- iv. Avoid exposure to direct heat for non-heat resistant items.
- v. Handle fragile equipment carefully to prevent breakage.

**8. Importance of maintaining hygiene and food safety (2 marks)**

- i. Prevents foodborne illnesses and contamination.
- ii. Ensures food remains safe and nutritious for consumption.
- iii. Protects consumers and enhances health standards.

**9. Signs of food spoilage (3 marks)**

- i. Foul or unusual odor
- ii. Change in color or texture
- iii. Presence of mold or slime
- iv. Off taste or sourness
- v. Gas formation / swelling in canned food

**10. Differences between food spoilage and food poisoning (2 marks)**

- i. Food spoilage is the physical or chemical deterioration of food, while food poisoning is illness caused by consuming contaminated food.



ii. Food spoilage affects quality, taste, and appearance; food poisoning affects health and causes symptoms like vomiting and diarrhea.

**11. Precautions when handling foods to avoid contamination (2 marks)**

- i. Wash hands thoroughly before handling food.
- ii. Cover and store cooked foods properly.
- iii. Use clean utensils and surfaces.
- iv. Avoid cross-contamination between raw and cooked foods.

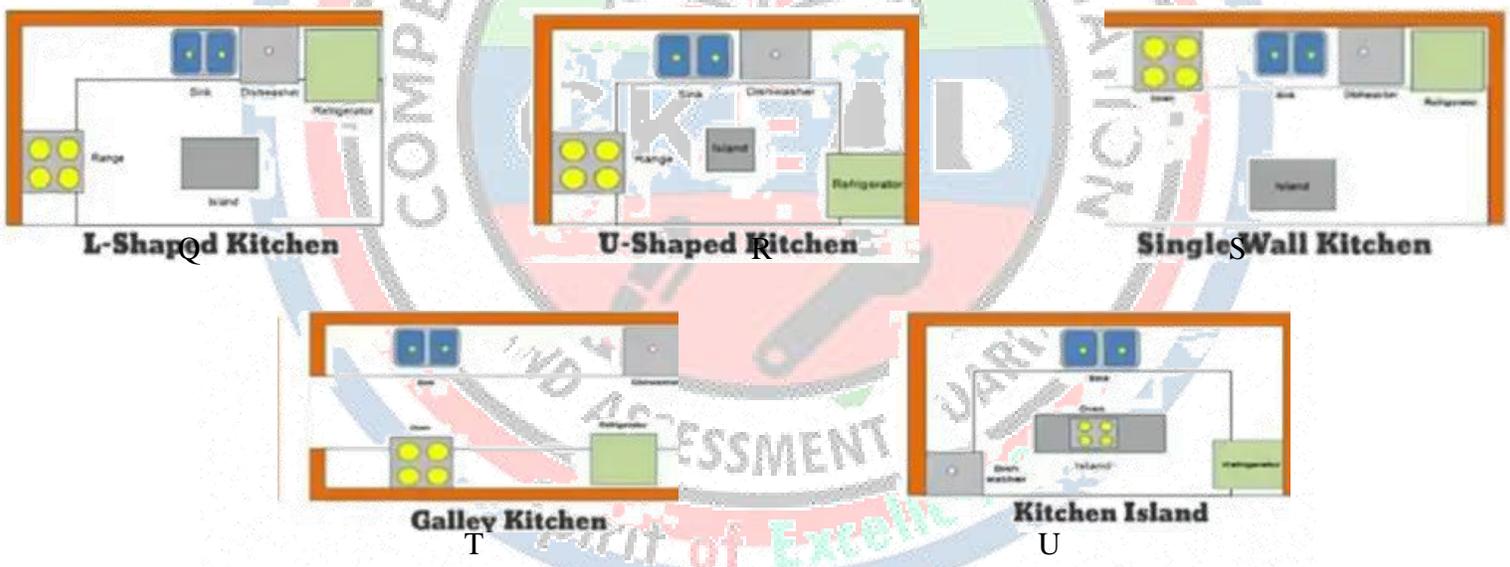
**12. Causes of food poisoning (3 marks)**

- i. Bacteria (e.g., Salmonella, E. coli)
- ii. Viruses (e.g., Hepatitis A, Norovirus)
- iii. Poor hygiene during food handling
- iv. Consumption of contaminated or spoiled food
- v. Presence of pests or insects in food

**SECTION B: (60 Marks)**

**13. Kitchen redesign and layout**

a) Identify the following types of kitchen layout (5 marks)



Q: L-shaped kitchen

R: U-shaped kitchen

S: Single-line / One-wall kitchen

T: Gallery kitchen

U: Island kitchen

**b) Advantages of selected layout (3 marks)**

- i. Efficient workflow and movement within the kitchen.
- ii. Maximizes space utilization.
- iii. Easy access to tools, equipment, and storage areas.
- iv. Improves safety by minimizing accidents.

**c) Factors to consider when selecting a kitchen layout (3 marks)**

- i. Size and shape of the kitchen space
- ii. Number of users / frequency of cooking
- iii. Type of cooking and storage requirements
- iv. Ventilation and lighting
- v. Budget for construction

**d) Identify the kitchen tools and equipment (4 marks)**

- ✓ E: pepper mill
- ✓ F: colander
- ✓ G: rolling pin
- ✓ H: refrigerator

**14. Food hygiene in schools**

**a) Importance of maintaining food hygiene (8 marks)**

- i. Prevents spread of foodborne diseases.
- ii. Ensures food is safe and nutritious.
- iii. Reduces absenteeism due to illness.
- iv. Protects reputation of the institution.
- v. Encourages healthy eating habits.

**b) Precautions when handling kitchen tools and equipment (6 marks)**

- i. Clean and sanitize tools before and after use.
- ii. Store equipment in dry, safe places.
- iii. Avoid using damaged tools.
- iv. Keep tools separate for raw and cooked foods.
- v. Use protective clothing (gloves, aprons).

**c) Personal hygiene practice (1 mark)**

- Wash hands thoroughly before handling food.
- Keep nails trimmed and clean.
- Wear clean clothing and hairnets.

**15. Food spoilage and food poisoning**

**a) Definitions (4 marks)**

- ✓ Food spoilage: The deterioration of food that makes it unfit for consumption due to microbial, chemical, or physical changes.
- ✓ Food poisoning: Illness caused by consuming food contaminated with harmful bacteria, viruses, or toxins.

**b) Causes of food spoilage (8 marks)**

- i. Bacterial or fungal growth
- ii. Improper storage conditions (temperature, humidity)
- iii. Exposure to air, light, or moisture
- iv. Presence of pests or insects
- v. Oxidation of fats or oils
- vi. Overripe or decayed raw materials

**c) Effects of food poisoning (3 marks)**

- i. Vomiting and diarrhea
- ii. Stomach cramps and nausea
- iii. Weakness and dehydration
- iv. Severe illness or death in extreme cases

**16. Microorganisms and prevention of spoilage****a) Microorganisms that cause food spoilage (8 marks)**

- i. Bacteria – Salmonella, E. coli, Listeria
- ii. Fungi – Molds and yeast
- iii. Viruses – Hepatitis A, Norovirus
- iv. Parasites – Giardia, Trichinella

**b) Ways of preventing food spoilage (6 marks)**

- i. Store food at appropriate temperatures (refrigeration/freezing)
- ii. Cover food to prevent contamination
- iii. Use clean utensils and containers
- iv. Consume food within recommended time
- v. Preserve food by drying, canning, or pickling

**c) Reason why proper storage prevents spoilage (1 mark)**

- ✓ Prevents microbial growth and prolongs shelf life of food.

**17. Signs of food spoilage and safe storage****a) Signs of food spoilage (5 marks)**

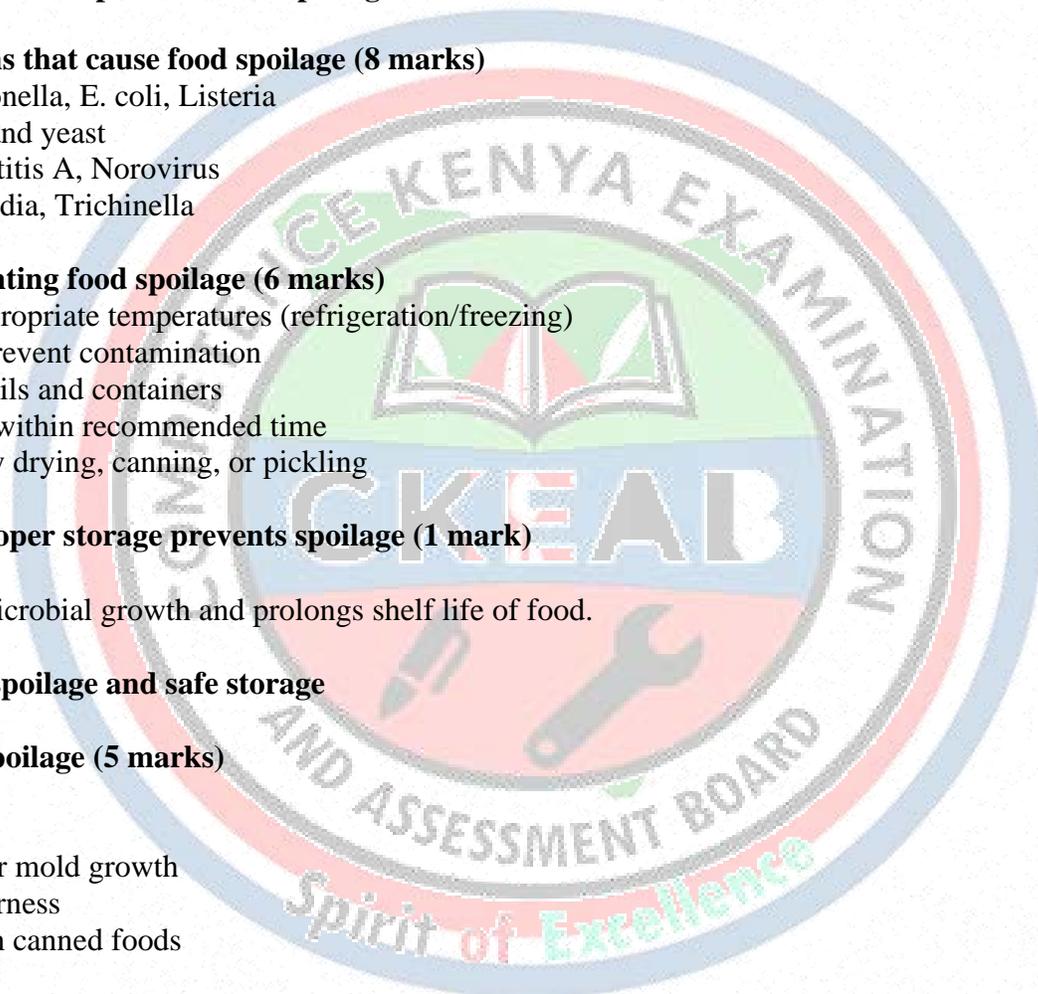
- i. Unpleasant odor
- ii. Change in color
- iii. Slimy texture or mold growth
- iv. Off taste or sourness
- v. Gas formation in canned foods

**b) Methods of safe food storage (8 marks)**

- i. Refrigeration or freezing
- ii. Airtight containers to prevent moisture and pests
- iii. Drying or dehydration of perishable items
- iv. Use of preservatives where appropriate
- v. Rotation of stock (FIFO – First In First Out)
- vi. Separate storage for raw and cooked foods

**c) Reasons why insects and pests lead to food spoilage (2 marks)**

- i. They feed on stored food causing contamination.
- ii. They introduce bacteria, fungi, or other pathogens.



## 18. Career opportunities and importance of Foods and Nutrition

### a) Career opportunities (8 marks)

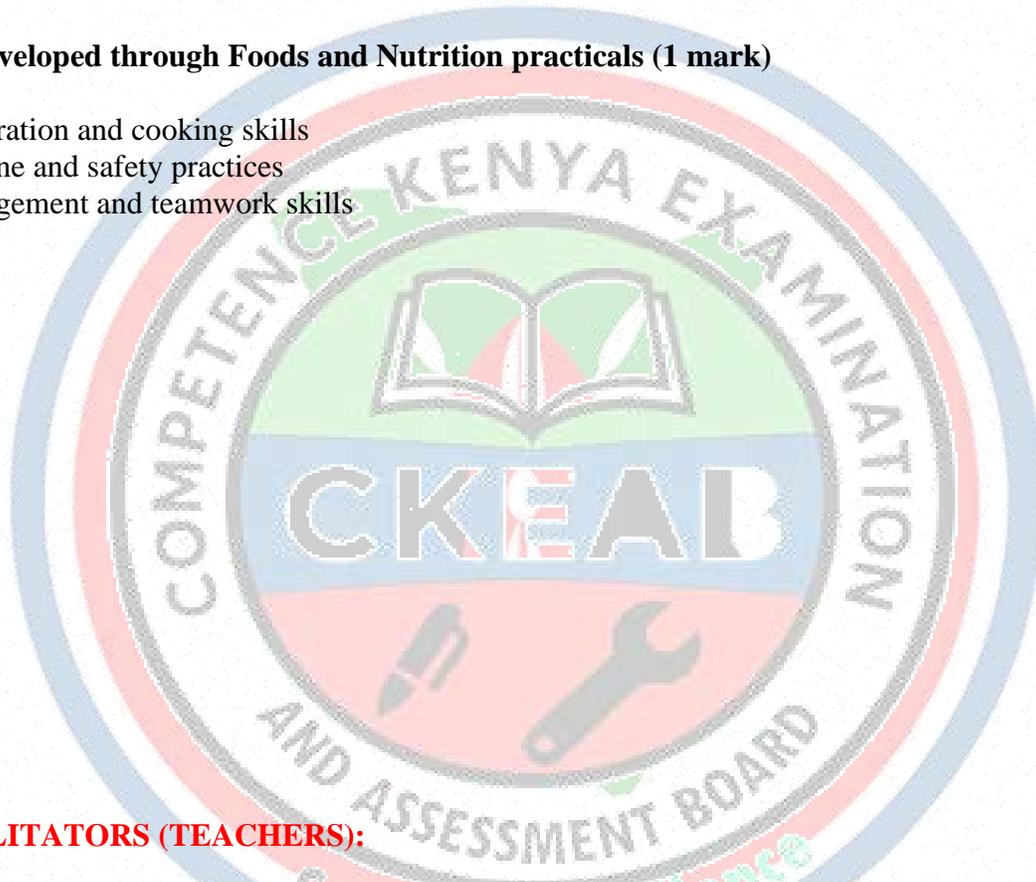
- i. Nutritionist / Dietician
- ii. Food Scientist / Technologist
- iii. Chef / Culinary Arts Specialist
- iv. Catering Manager / Food Service Manager
- v. Public Health Officer
- vi. Food Safety Inspector

### b) Importance of studying Foods and Nutrition in senior school (6 marks)

- i. Promotes healthy eating habits and lifestyles.
- ii. Provides knowledge for proper food handling and safety.
- iii. Equips students with skills for careers in food, health, and hospitality.
- iv. Enhances understanding of nutrient needs and disease prevention.

### c) Competency developed through Foods and Nutrition practicals (1 mark)

- ✓ Food preparation and cooking skills
- ✓ Food hygiene and safety practices
- ✓ Time management and teamwork skills



### NOTE TO FACILITATORS (TEACHERS):

*The marking scheme provided is not exhaustive. Facilitators are advised to use their professional judgment when awarding marks. Any correct, relevant, and scientifically or contextually acceptable answer that demonstrates understanding of the concepts should be credited. Where examples are required, learners may provide other valid examples apart from those listed in the scheme.*

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