Chapter-2

HACCP

Learning Objectives: After completing this chapter student would be able to:

a) Define HACCP

b) Explain the meaning and importance of HACCP

c) Incorporate the rules of HACCP at work place

d) Apply systematic approach of HACCP

I. Introduction & Importance:

HACCP is one of the most effective food safety system. HACCP is: Hazard Analysis Critical Control Point system. The purpose of HACCP is to identify, monitor, and control dangers of food contamination. This system has been widely adopted throughout the food service industry.

This system consists of following seven steps :

1. Identify hazards.
2. Identify critical control points (CCPs).
3. Set up standards or limits for critical control points.
4. Set up procedures for monitoring critical control points.
5. Establish corrective actions.
6. Set up a recordkeeping system.
7. Verify that the system is working.

These steps are the basis of the following discussion.

HACCP begins with a concept called the **flow of food.** This term refers to the movement of food from receiving through the various stages of storage, preparation, and service. Through a food service operation, until it gets to the final consumer. The flow of food is different for each item being prepared. Some menu items involve many steps. For example, a luncheon dish of creamed chicken and vegetables over rice might have the following steps:

- Receiving raw ingredients for Cooking (chicken, vegetables, cream, rice, etc.)
- Storing raw ingredients
- Holding and serving
- Preparing ingredients
- Cooling and storing leftovers (washing, cutting, trimming, etc.) Reheating, holding, and storing leftovers
- Even the simplest items undergo several steps. For example, a cake bought from a commercial baker when served as a dessert to the customer, goes through at least three steps. There are Receiving, Storing and Serving.

II. Critical Control Points in HACCP

At each of these steps, as foods flow through the operation, risks can lead to dangerous conditions, which are called hazards. These hazards can be divided into three categories:

1. Contamination, such as using soiled cutting surface, torn packaging, working on food without washing hands careless spilling of liquid detergents (to clean utensils on the food. Contamination can lead to insect or micro organism infestation.
2. Growth of bacteria and other pathogens due to such conditions as inadequate refrigeration or storage, and holding hot foods below 135°F (57°C).
3. Survival of pathogens or continued presence of toxins, usually because of inadequate cooking or heating or inadequate sanitizing of equipment and surfaces.

One important difference is that the hazards addressed by HACCP include chemical and other hazards in addition to disease-causing organisms. However, most of the hazards we are concerned with here are those that affect potentially hazardous foods .

At each step where there is a risk of one of these hazards, it is possible to take action that eliminates the hazard or reduces it to a minimum. These steps are called critical control points, or CCPs. In simple language, setting up an HACCP system starts with reviewing the flow of food to figure out where something might go wrong, then deciding what can be done about it. In the language of HACCP, these steps are called assessing the hazards and identifying critical control points.

III. Setting Standards and Following Procedures

The next step in designing an HACCP food safety system is setting up procedures for critical control points. At each critical control point, food workers need to know what standards must be met, what procedures to follow to meet the standards, and what to do if they are not met. To reduce the chances for making mistakes, these standards and procedures are written out. Whenever possible, they should be included in the operation's recipes.

Some procedures are general and include the sanitation rules. For example: Wash hands before handling food and after handling raw foods; Others apply to specific items. For example: Prepare a beef roast to an internal temperature of at least 145°F (63°C) and ensure that it stays at that temperature for at least 3 minutes.

Careful observation is needed to know that standards are met. This often involves measuring. The only way to know, for example, that a roast has reached the required internal temperature is to measure it, using a clean, sanitized thermometer.

Managers must ensure that all employees are trained to follow procedures and have the equipment needed to do the job. The practice of standard procedures promotes the professional competency in the staff.

Once these procedures are developed, additional steps in setting up an HACCP system are important to ensure that the system is excecuted effectively. This will include monitoring critical control points, taking corrective action if procedures are not followed, keeping records of all aspects of the system, and verifying that the system is working efficiently.

• Review Questions:

1. Define HACCP.
2. What is the importance of HACCP at food production areas?
3. What are the steps of Critical Control Point?
4. What do you understand by flow of food?