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# UNIT 10 FOOD MANAGEMENT: DELIVERY AND SERVICE — GOALS AND ISSUES

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## 10.1 INTRODUCTION

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In our previous unit, we learnt about different aspects of records and cost control system as a means of food management in a food service establishment. In this unit, we shall study the last aspect of food management i.e. food service systems and the food service systems model.

We shall study about the different methods of delivery service systems for meals in different types of institutions. After a brief review of these methods, we will have a look at the various factors that may affect the choice of a particular delivery system.

Finally, we shall learn about the use of disposable items in food service institutions and the factors that lead to the usage of disposables.

### Objectives

After studying this unit, you will be able to:

- discuss the functioning of a food service organization as a set of units having interrelated functions,
- describe the significance of a good delivery/service system,
- explain the factors that affect the choice of a delivery system,
- enumerate the different methods of food service and its applications to the different food service systems, and
- examine the factors behind the use of disposables in food service establishments.

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## 10.2 FOOD SERVICE SYSTEMS

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Until now, we have studied food service establishments as an industry. Here, in this unit, we shall study about food service organization as a system. As you know,

system is a set of interrelated parts with a purpose. These interrelated parts are referred to as subsystems, which depend on each other for achieving a common goal. These subsystems operate within the environment of the organization utilizing the various supporting resources such as money, materials, time, equipments, facilities and personnel.

With the increase in the number of food service organizations, catering to the many segments of society, there have been many changes taking place within this varied industry. Managers are seeking approaches to deal with complexities of food service organizations to meet the continually changing technological, economic, political and sociological demands of today's world. The "systems approach" you may recall studying in Unit 2 earlier in section 2.6, has been one such outcome to facilitate problem solving and decision making as this approach focuses on the totality of the organization. A food service systems model is an example that holds true the systems approach. We shall learn about it in the next section. In the transformation, element delivery and service are considered to be subsystems, which meet the goal of providing quality food and services to a given clientele. The choice of method of distribution and service will depend on the type of food service system, and its significance is reflected on consumer needs.

Let us then understand the food service system model.

## 10.3 A FOOD SERVICE SYSTEMS MODEL AND ITS SIGNIFICANCE

In this section, we shall have an insight to a food service system model and its components and its significance.

### 10.3.1 Components of a Food Service System

Refer to Figure 10.1, which illustrates a food service systems model.

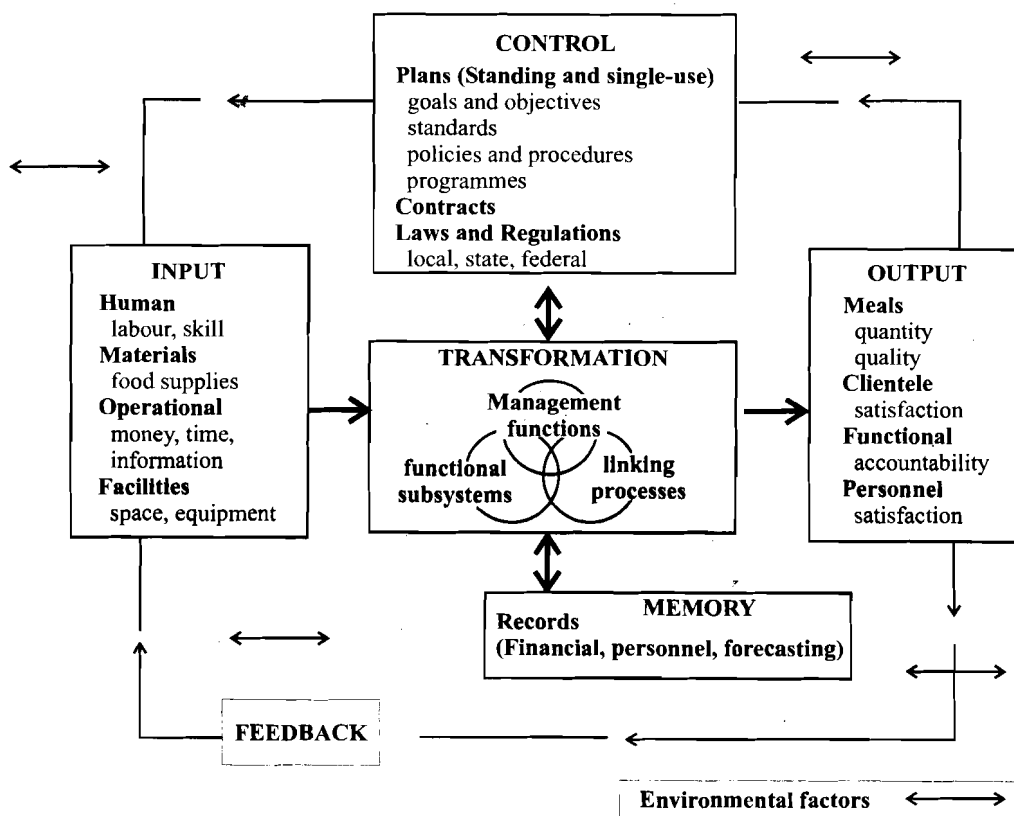


Figure 10.1: Food service systems model

As you may have noticed in Figure 10.1, this system indicates the basic components of any open system i.e. input, transformation and output. The additional components of control, feedback, memory are integral parts of the food service systems model. What are these components and what is their role in a food service system? Let us read and find out. We shall begin with inputs first.

A) *Inputs* are the *physical and human resources that are transformed to produce the outputs of the system*. These inputs also known as *resources* as highlighted in Figure 10.1 can be classified as:

- *Human*: Labour and skill
- *Materials*: Food and supplies
- *Operational*: Money, time, utilities and information
- *Facilities*: Space and equipment

The input requirement depends on the objectives of the organization for e.g. a specialty restaurant serving fine cuisine will have a major impact on type and skill of staff, the raw ingredients and supplies needed for the service. In comparison, a fast food operation with take away counters would require only minimal staff with few skills, and the raw ingredients and supplies would also be limited.

B) *Transformation*, one of the other basic components in the food service systems model (refer to Figure 10.1), has been defined as the *collective changes of inputs into outputs*. It is further made up of functional subsystems, managerial functions and linking processes. All these are interrelated. The *functional subsystems* may be classified according to their purpose and may include procurement, pre-processing, production, delivery and service maintenance. Refer to Figure 10.2, which illustrates a food service system model emphasizing distribution and service as one subunit of the transformation component.

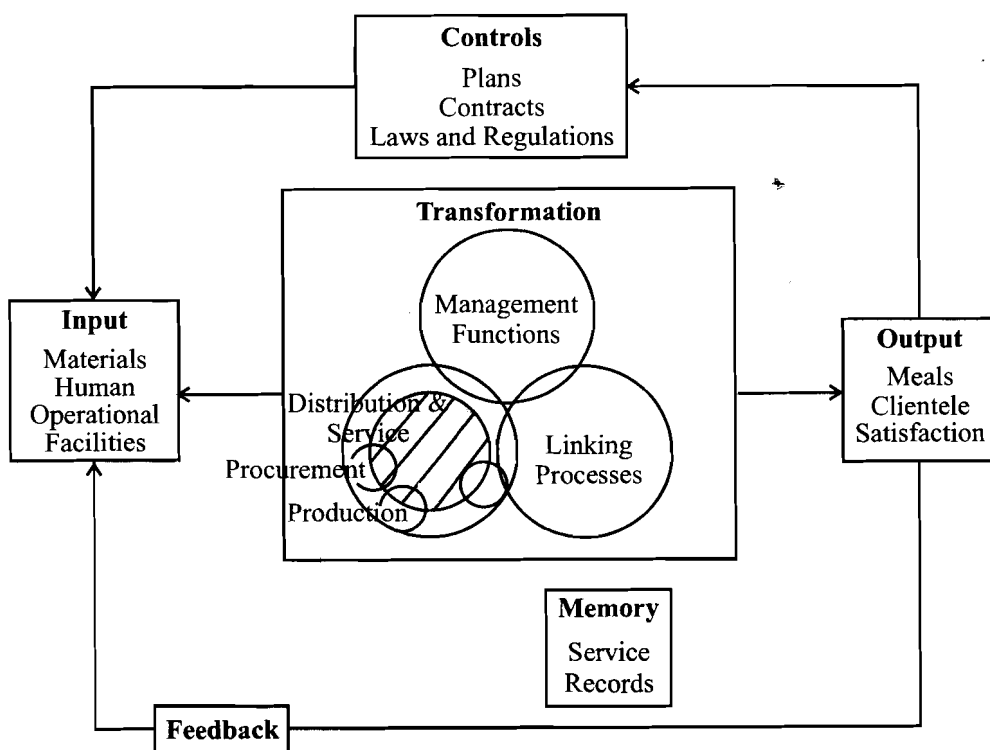


Figure 10.2: Food service model emphasizing distribution and service as one subunit of transformation

The type of system, you would realize, will determine the activities of the subsystems for e.g. hospital, the distribution and service is very complex, as the challenge lies in delivering the appropriate food at the right temperature and of a high quality, to patients in different locations. It is, therefore, important to design a subsystem to meet the characteristics of the organization, as can be seen in airline catering, where the food contractor providing meals for several airlines faces the complexities of different menus and schedules, varying numbers of passengers, and sometimes problems of delayed or cancelled flights. *Management functions* provide for the co-ordination of the subsystems. All functions like planning, organizing, staffing, leading, and controlling co-ordinate the uses of resources, towards achieving the objectives. The *linking processes* are described as decision making, to select a course of action, communication where decisions and other information are transmitted throughout the system, and balance which refers to adaptations the management has to make to changing economical, political and social conditions.

- C) *Outputs*, as one of the component of food service systems model, are the *products and services that result from transforming inputs of the system and express how the objectives are achieved*. The primary output in any foods service system is the meal provided as shown in Figure 10.1. Various *types of services* may be *outputs*, and *clientele* and *personnel satisfaction* are desired *outcomes*. Let us have a look at this definition more closely. We just studied about the different inputs and how these are to be transformed into outputs. Now what do you mean by the term objective? Well, in simpler terms, objective may be defined as *the goal intended to be attained*. In terms of food service system, the word objective has a similar meaning. Let us get to know what it is.

*Spears et. al.* (89) define the objective as *production of food to satisfy the expectations, desires and needs of the customers, clients or patients of particular food service*. The customers' *desires, needs and expectations* must be taken into account in planning, producing and evaluating the food served in any organization. Some of the outputs that may be taken into account could be *personnel satisfaction*, which is related to the quality of work done by people in an organization. *Financial accountability*, as highlighted in Figure 10.1, is another output required to maintain the entire system. Profit is not the only concern especially in non-profit food service organizations. Accountability in terms of expenses and revenue could be an indicator of how funds could be utilized for running the organization.

- D) The *control* element refers to the *policies, procedures and standards of an organization*. These are *internal controls*. *Contracts, Local, State laws and regulations* are *external controls*.
- E) *Feedback* provides information to continuing the effectiveness of the system. It gives information for control and evaluation, and hence assists the system in adapting to changing conditions. Some examples of such feedback are clientele comments, plate waste, patronage, profit or loss, employee performance and morale, which a food service manager can utilize for regular evaluation.

Let us next understand the significance of the model we just learnt.

### **10.3.2 Significance of the Food Service Systems Model**

*Quality assurance and improving quality* is the theme of any food service industry. What do you understand by these terms? Let us find out.

*Quality assurance* is a term applied to *the process of defining quality standards*. At each step of the operation, quality controls are essential, from procurement specifications to delivery and service to the clientele of the food service operation.

Achieving the goal of producing an acceptable quality product, served in an acceptable manner of the consumer, requires continuous surveillance. Figure 10.1 indicates the

food service system model with emphasis on *control* being an important aspect of quality assurance.

With this, we come to an end on our discussion of concept and significance of food service system model. Before we proceed further, let us check our understanding of what we have learnt so far.

**Check Your Progress Exercise 1**

1) What is a food service system?

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2) Briefly discuss the various components of a food service system model.

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3) Highlight the significance of feedback in the improvement of a food service organization.

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4) What do you understand by the term 'quality assurance'?

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With a basic understanding of the food service system model, let us next get to know of the different methods of delivery service systems.

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**10.4 METHODS OF DELIVERY SERVICE SYSTEM**

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The term '*delivery*' refers to *making ready prepared foods, and transporting them from the site of production to the place where these will be served i.e. the place of service.* The process of *service*, on the other hand, involves *assembling prepared food items and distributing* them to the consumers. With reference to the

food service systems model (Refer to Figure 10.2), *distribution (delivery) / service* represents a *third major subsystem*. Along with procurement and production, it meets the goal of providing quality food and services to a given clientele. In any organizations, these two processes of delivery and service may be two distinct but interrelated functions, and depending on the type of food service system, distribution may or not be a major function.

Let us have a look at those food service systems where distribution and service of food serves a crucial role and is a rather complex process. For instance, in hospital food services where patients must be served in individual rooms, located on many floors and perhaps in separate buildings, distribution may be a major concern. Ensuring that appropriate food is sent to the appropriate place, to a particular patient, is a rather complex process. Further more, the food must be at the right temperature and aesthetically appealing.

Now let us have a look at another case where the process of distribution and service of the food prepared is not the sole responsibility of food producers rather the client is equally involved. Such as in fast food operations, where clients take the food from the counter, directly after production, distribution is relatively simple. It does become apparent that distribution and service becomes the responsibility of the customer and not the personnel.

Service too will vary ranging from highly trained skilled service in upgrade restaurants to self-service counters as in cafeterias. The method, speed and quality of services provided can “make or break” a food service establishment.

The quality of the food may be excellent, the sanitation and hygiene good, procurement and storage ideal, but if the service is lacking, the establishment will be rated poor by the clientele. It has been seen that in restaurants serving mediocre food, the clientele will repeatedly return if the waiter/waiters provides high quality service. Even we as consumers do often visit a place where the service of food has been pleasant and of high quality. So, let us focus on the methods of delivery/service systems that are employed in food service establishments.

### ***Methods of delivery/service***

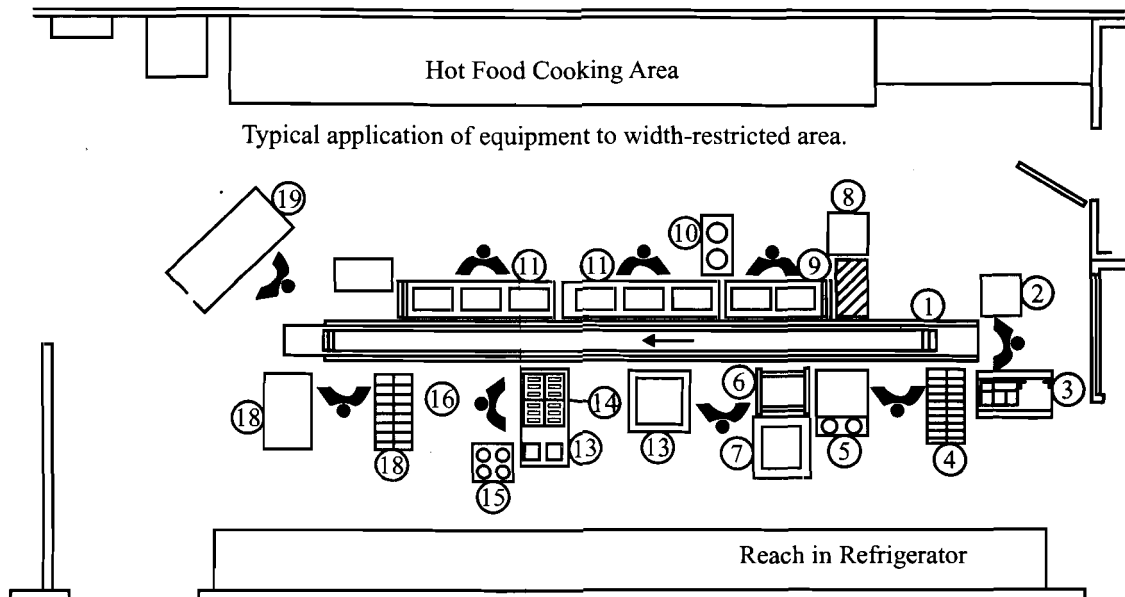
Meal assembly can be of two types. These include:

- a) Centralized
- b) Decentralized

Let us understand these systems.

#### **10.4.1 Centralized Delivery System**

In centralized delivery method, prepared foods are portioned for individual service and meals are assembled at a central area, which may be inside or close by to the main kitchen or the main production facilities. In this facility, the time between production, assembly, distribution and service can be minimal. This, in turn, facilitates the delivery of meals to the clients where plates are served in a central location and are then transported by various means to the dining areas. Also, this helps to maintain the right temperature of the foods served. Hot menu items are held in food warming cabinets, where they remain until placed in hot food serving units during tray assembly. A diagrammatic representation of centralized meal assembly is presented in Figure 10.3. Cold food items are held under refrigeration. The assembled trays are then distributed to the patient using a variety of carts. Some institutions use heated and refrigerated tray carts, which may be motorized or pushed manually by hospital personnel.



- |   |                             |    |                        |    |                                  |
|---|-----------------------------|----|------------------------|----|----------------------------------|
| 1 | Tray Make Up Conveyor       | 7  | Ice Cream Cabinet      | 13 | Bread and Toast Caddy            |
| 2 | Tray Dispenser              | 8  | Soup Bowl Dispenser    | 14 | Toasters                         |
| 3 | Tray Starter                | 9  | Hot Soup Caddy         | 15 | Bread and Butter Plate Dispenser |
| 4 | Temperature Lock Underplate | 10 | Heated Plate Dispenser | 16 | Double Overshelf                 |
| 5 | Cup and Saucer Dispenser    | 11 | Hot Food Caddy         | 17 | Dome Cover Caddy                 |
| 6 | Cold Food Rack              | 12 | Milk Cabinet           | 18 | Reject Tray Caddy                |
|   |                             |    |                        | 19 | Patient Tray Trucks              |

Figure 10.3: Centralized meal assembly

The high initial and maintenance costs of heated and refrigerated carts have led to other methods for maintaining proper temperatures on assembled trays. One such system uses specially designed dishes that have been preheated in an infrared oven, and then transferred to an insulated base. The hot menu items are portioned onto the plate, which is covered by a dome designed to fit the base container, thus keeping the food warm until service to the patient. This unit is placed on the individual patient's tray, and other menu items that have been individually wrapped are added. The assembled trays are then transported in an unheated cart for service.

This process of distribution includes activities relating to the movement of assembled trays from point of assembly to the patient area. Some of the methods used for hot and hot/cold thermal retention are enlisted herewith:

*Hot Thermal Retention*

- Pellet system
- Insulated components
- Heat support cart

*Hot/Cold Thermal Retention*

- Pellet and sublimation refrigeration
- Split tray
- Match-a-tray
- Insulated trays
- Insulated components

A brief review of these major meal distribution systems, and a few others (such as microwave ovens, convection ovens, infrared ovens etc.) along with their benefits and constraints is presented later in Table 12.1 in Unit 12.

The size of the area and the number will determine the type of conveyor system required to provide support. Such systems include:

- Manual conveyors — trays bide
- Simple mechanical conveyors — roller type
- Motorized conveyors — straight line/circular

Next, we move on to the second type of delivery system, that is, decentralized delivery system.

#### 10.4.2 Decentralized Delivery System

In the decentralized delivery system, as the name suggests, the food products are produced in bulk in one location and transported to various locations for assembly at sites near patients. Equipments to maintain proper temperatures – food warmers, hot food counters, and refrigerated equipment must be provided at each location. Thus, instead of one central serving area, there are several smaller ones close to the consumers. The equipments that are provided in the smaller serving areas also sometimes include provision for ware washing. In cases, where it is not possible to provide dish washers or the facility of ware washing, the soiled utensils and equipments are returned to the central area. This, in turn, has an added advantage of eliminating the need for duplication of dishwashing equipment for each pantry and hence cutting down the equipment costs, as well as, maintenance cost and labour charges. However, it duplicates the effort involved in transportation of utensils and equipments to and from the central area to the respective pantries. Hence, over a period of time, it might get more expensive than providing separate dish washing facilities for each serving area. The types of food service that involve this type of delivery system include *large hospitals and medical centers, industrial plants* with several serving units, *hotels* providing room service facility and *banquets* from serving kitchens within the facility.

Now, that we have gone through both the systems of delivery of food items, let us briefly compare both the methods and find out which one is better or has the maximum potential and far-fetched benefits for any food service institution.

#### 10.4.3 Centralized vs Decentralized

Many health care institutions have moved towards centralized assembly system as this system has the advantages of eliminating double handling of food and facilitating supervisions of real assembly because the activity takes place in one location rather than in many. It allows for standardization of portions, uniformity in presentation, and decreased waste. Less staff time is needed and the space occupied by floor kitchens can be used for other purposes.

Decentralized real assembly is still used in some institutions. It offers the advantage of less time between assembly and service to patients, allowing for potentially higher quality food. It allows for greater flexibility in providing for individual patient needs and in making last minute substitutions and changes.

With this review we end our study of the different methods of food service. Next, let us get to know what are the different factors that affect the choice of delivery systems.

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### 10.5 CHOICE OF DELIVERY SYSTEMS AND SERVICES ATTACHED TO IT

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Most of the characteristics of distribution and service are common to all types of food service systems; differences in the system will lead to different demands in some aspects of the distribution function.

Here, we have a brief discussion on these food service systems. However, a detailed discussion on all these systems is presented in Unit 12. The choice of the delivery/

service system you will notice vary according to the food service system and hence the discussion presented herewith will indicate the choice of the delivery/service technique according to the type of food service system and the types of services attached to it. A detail discussion on the types of services is also given in Unit 12. Here a mere introduction to these services is presented.

### **10.5.1 Choice of Delivery/Service Systems**

These four food service systems prevalent in food service establishments include:

- Conventional Food Service System
- Commissary Food Service System
- Ready Prepared Food Service System
- Assembly/Serve

Let us get to know about them.

#### **A) *Conventional Food Service System***

In the conventional system, most menu items are produced on the premises and distributed to serving areas close to production facilities. Various types of hot/cold holding equipment would be required to maintain the proper temperature for various menu items before service. Depending on the type of service areas, this holding equipment may be stationary or mobile.

Food can be transported to the required dining area, in modular units, which provide a service counter for self or waiter/waiters service.

In hospital settings, a choice of either centralized or decentralized real assembly may be the method chosen. Hospitals required more complex distribution system as compared to other types of food service operations.

Depending on the layout and design, a combination of real assembly and distribution methods may be used.

Next, let us review the commissary food service system.

#### **B) *Commissary Food Service Systems***

Commissary food service systems are characterized by centralized production with distribution of prepared menu item to several remote areas for service or final production.

Depending on the nature of the operation for school kitchen, airline catering, distribution and service can take many forms. The unique feature here is that a method must be provided for transporting the food to remote locations of the service centers. These facilities may be closely located or they may be located great distances away from the central production unit as in many large commercial chain operation like Mac Donalds. For this reason, this system requires specialized distribution equipment. Foods produced in the central commissary may be transported frozen, chilled, or hot, in bulk or in individual portions. The receiving areas must be designed to accommodate the delivery equipment. Special precautions are necessary to preserve the microbiological quality of foods because of the length of time between production and service.

#### **C) *Ready Prepared Food Service System***

In the ready prepared food service system, menu items are produced and held either frozen or chilled for service later. They are packed in bulk or individual portion or in combination as in airline services, wherein two or three menu items may be

portioned onto individual serving dish. The type of distribution equipment needed by ready prepared system depends on whether they use a cook-chill or cook-freeze technique. A unique characteristic of the ready prepared service is the *heat processing of prepared items prior to service*. Microwave, convection or infrared oven is normally used. This means that food is transported in a chilled or frozen state, and therefore cold temperature support is needed during the delivery process.

Finally, let us move on to assembly/serve delivery system.

#### D) *Assembly/Serve Food Service System*

The assembly/serve system uses foods that are ready to serve or require little or no processing prior to service. Many items are stored as bulk, pre-portioned or preplated frozen foods.

When foods are served cafeteria style, the bulk form is generally used where the heat processing before service can be done in a service unit or auxiliary area, in a similar manner used in the ready prepared system. If proportioned or preplated items are used similar heat-processing techniques must be used.

We have briefly reviewed the service systems, which can be chosen for a food service establishment. Next, let us have a look at the different types of services that exist in food service institutions.

### 10.5.2 Types of Services

Services in this industry can be categorized in many ways, and different combinations exist. However, most of them can be discussed under three broad categories, which include:

- a) Table/counter service
- b) Self service
- c) Tray service

Table service has been predominantly used in commercial organizations but many forms of self-service have also become popular. A wide range of self-service from cafeterias and buffet to vending machines makes it possible to permit flexibility and versatility needed for different service styles. Tray service remains the choice in hospitals for patient meal service and for in flight meals in the airline industry.

A more detailed study of different services is discussed in Unit 11 later in this course. Hence, let us now move on to another important aspect linked with food service i.e. the use of disposables in the service area.

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## 10.6 USE OF DISPOSABLES IN THE SERVICE AREA

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In the past 20 years, there has been a considerable growth in the use of disposables. By disposable we mean any item that is designed to be disposed of after use. The use of many public house catering, fast food and take away establishments in the reason why disposables are so commonly used, in fact has now become a trend.

To meet the requirements of disposable-use in food service establishments, a myriad of items are available these days in market. Let us quickly review what are these and which are the areas where these are utilized.

#### *Types of Disposables*

The main varieties of disposables available are used in the following areas:

- Storage and cooking

- Service of food and beverages e.g. plates, knives, forks, cups etc.
- Decor — napkins, table cloths, slip cloths, banquet rolls place mats.
- Hygiene — wipes
- Clothing — approves chefs' hats gloves
- Packaging — for marketing and presentation

The types of disposables that may be used to replace restaurant linen, like service, napkins/tray cloths etc. may be beneficial in preventing contamination or cross infection, which would be more likely with the use of a traditional glass cloth. Most forms of disposables, can be of various colours, patterned or may have the logo or motto of the hotel printed on them. Choice of colours and patterns must be aesthetic enough to blend with the surroundings and food and beverages served. Throw away packs of knives forks and spoons more convenient and hygienic, where customer turn over is very high in a short span of time. This is applicable in transport catering and large canteens where delays at service points will be eliminated and there would be no need of washing cutlery napkins etc. Hospitals also could use disposables to avoid cross infection, which would also give a saving on costs and labour.

Materials used for serving/holding food can vary. Aluminium containers, plastic paper may be used. The choice of material will vary according to the method of preparation, packaging and style of service. High quality materials, where the disposables, look very much like chinaware have also been introduced. These have a high quality, overall finish, and a smooth hard surface. The plates are strong and rigid and they do not bend under pressure. A plasticizing ingredient used ensures that they are grease and moisture proof even against hot gravy. They are available in various forms, such as oval lunch plates, snack trays, and compartment plates.

Helping to cut costs in one of the prime reasons why many establishments use disposables. At the same time, the disposables must be attractive, presentable and acceptable to the client. The choice of disposables may be determined by the following:

- 1) Necessity because of
  - outdoor catering
  - automatic vending
  - fast food
- 2) Cost considerations as
  - cost of laundry
  - savings on wash-up staff.

Next, we shall have a look at the factors involved in selection of disposables.

#### ***Factors involved in selection and use of disposables***

Due consideration must be given to the cost of disposables such as dinnerware, space and other equipments for food processing, preparation and washing. Enough labour must be employed for handling the disposable items such as paper or plastic.

Apart from these factors, there are certain other factors, which play an important role in selection of disposables. These include quantities to purchase. This is further determined by the space available to store these. Another important consideration is the relative closeness to market supply, number of people to be served at a given period of time and the menu items offered. Next, we shall briefly look at the reasons behind the increased use of disposables.

The factors, which have caused the growth in the market of 'disposables' or 'throwaway', are as follows:

- The need to reduce costs

- Difficulty in obtaining labour
- Cutting the high cost of laundering
- Improved standards of hygiene
- Breakage cost minimization
- Reduction in storage space required
- Changes in cooking and storage technology (cook chill/cook freeze)
- Needs of transport catering on trains, ships and planes
- Fast food development related to customer acceptability.

So then there has been a considerable growth in the use of disposables is the use of disposables recommended? Well read the advantages and disadvantages of using disposables highlighted next and find out for yourself.

*Advantages*

The advantages of using disposables include:

- equipment and labour reduced
- standards of hygiene improved
- service can be speeded up
- temperature maintenance of cooked food is possible
- can be used as promotional aids.
- reduces the amount of capital investment
- easily transported
- cheaper than hiring conventional equipment

Let us have a look at the disadvantages, next.

*Disadvantages*

- customer acceptability may be poor.
- may not be very cost effective as the amount required is more and may be written than buying conventional equipment.
- large quantities specially, back up quantities are required.
- there is a great reliance on supply and delivery time.
- Disposal of large quantities of disposables poses problems to some extent.

With this, we end our discussion on disposables that are used in food service institutions. Hope that you have understood the various types of delivery/service systems. Before we move on to our next unit on delivery and service styles, let us check our understanding of this topic.

<p><b>Check Your Progress Exercise 2</b></p> <p>1) The method, speed and quality of services provided can make or break a food service establishment. Discuss.</p> <p>.....</p> <p>.....</p> <p>.....</p>
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2) What are the two methods of delivery/service systems? Highlight the advantages and disadvantages of both.

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3) List a few hot and cold thermal retention systems. Briefly discuss the benefits and constraints of using a microwave oven.

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4) What are the different types of food service systems that are employed in food service establishments? Discuss delivery/service technique of any one of them.

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5) Highlight the factors that have led to the growth of disposables in the service area. Also, give any two advantages and disadvantages of disposables.

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### 10.7 LET US SUM UP

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In this unit we read about the food service system model. We learnt that a food service system model helps to understand the functioning of any food service organization in totality. It explains that all its functions are interacted and work with the sole objective of achieving goals. One such major subsystem is the delivery and service, where the goal of providing quality food and services to target clientele is achieved.

Further the unit highlighted that the choice of a delivery, service system will vary according to the type of food service system i.e. conventional, commissary, ready prepared and assembly serve. The centralized and decentralized methods of assembly can be applicable to any food service system. Major factors that determine the choice would be complexities of the organization as in hospitals control is evident, transportation of cooked foods to remote locations or whether foods are distributed in bulk quantity or individual portions. Different types of heat processing equipment may be used. Services can be broadly categorized as table/counter, cafeteria/buffet and tray services.

Finally the unit dwelt on the use of disposables in food service unit. Disposables are now available in several of material, colours and shapes and have made service cost effective, hygienic and labour saving. However the choice of using disposable depends on organizational policies which center on clientele satisfaction and availability of large amounts of disposable items for service.

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## **10.8 GLOSSARY**

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- Cook-chill** : it is a simple, controlled system of food preparation designed to provide more flexibility in food service. The technique involves the full cooking of food, followed by rapid chilling and storage at controlled temperatures (for up to five days).
- Disposable** : any item that is designed to be disposed of after use.

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## **10.9 ANSWERS TO CHECK YOUR PROGRESS EXERCISES**

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### **Check Your Progress Exercise 1**

- 1) A food-service establishment is an example of a system. The outcome of the system (food served to customers) is influenced by numerous factors that make up the system, such as ingredients, workers, equipment, preparation/cooking processes, and the economics of the establishment.
- 2) The various components of a food service system model include input, transformation and output. The additional components are control, feedback, and memory. Refer to sub-section 10.3.1 for a detail discussion on these components.
- 3) Feedback is significant in the improvement of a food service organization because it provides information to continuing the effectiveness of the system. It gives information for control and evaluation, and hence assists the system in adapting to changing conditions.
- 4) The term quality assurance is applied to the process of defining quality standards. At each step of the food service operation, quality controls are essential, from procurement specifications to delivery and service to the clientele of the food service operation.

### **Check Your Progress Exercise 2**

- 1) The method, speed and quality of services provided can make or break a food service establishment. This is true because the quality of the food may be excellent, the sanitation and hygiene good, procurement and storage ideal, but if the service is lacking, the establishment will be rated poor by the clientele.
- 2) The two methods of delivery/service systems are centralized and decentralized method. Refer sub-section 10.4.3 and write the advantages and disadvantages of these two systems based on your understanding.
- 3) The hot and cold thermal retention systems include pellet and sublimation refrigeration, split tray, match-a-tray and insulated trays. Refer Table 10.1 for the constraints and benefits of using microwave oven and write the answer on your own.
- 4) The different types of food service systems that are employed in food service establishments include conventional food service system, commissary food service system, ready prepared food service system and assembly/serve. Refer to section 10.5 and describe the technique of any one of them in your own words.
- 5) Refer to section 10.6 and list the factors that have led to the growth of disposables in the service area and also mention any two advantages and disadvantages of using disposable as highlighted in this section.