

Housekeeping and Laundry Service

Level-I

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Acronym

1. PMA =Pest management Agency
2. PPE = Personal Protective Equipment
- 3 .SDS=Safety Data Sheet

Introduction to the Module

Welcome to the module in Cleaning Public Areas. It contains training materials and activities for you to complete the unit of competency “Cleaning Public Areas” contains Knowledge, Skill and attitude required to Cleaning Public Areas effectively, Understand how to prepare for cleaning and set up equipment and agent , Cleaning furniture’s and fixtures ,clean and maintain food serving area, Apply pest control activity and Complete cleaning procedure

This module is designed to meet the industry requirement under the Housekeeping and Laundry Service occupational standard, particularly for the unit of competency: Cleaning Public Areas

This module covers the units:

- Prepare for cleaning
- Cleaning furnishing’s and fixtures
- Clean and maintain food serving area
- Apply pest control activity
- Complete cleaning procedure

Learning Objective of the Module

- Understand how to prepare for cleaning
- Perform cleaning furnishing s and fixtures
- Apply clean and maintain food serving area
- Apply pest control activity
- Complete cleaning procedure

Module Instruction

For effective use this modules trainees are expected to follow the following module instruction:

1. Read the information written in each unit
2. Accomplish the Self-checks at the end of each unit
3. Do the self-check giver at the end of each unit
4. Perform Operation Sheets which were provided at the end of units
5. Do the “LAP test” giver at the end of each unit and
6. Read the identified reference book for Examples and exercise

Unit one: Prepare for cleaning

This unit is developed to provide you the necessary information regarding the following content coverage and topics:

- Cleaning requirements and methods
- Components of cleaning
- Cleaning equipment
- Cleaning agents and supplies
- Personal Protective Equipment (PPE)
- procedures of using cleaning equipment

Applying maintenance procedures This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- understand cleaning requirements and methods
- Identify components of cleaning
- Identify cleaning equipment
- Understand cleaning agents and supplies
- Use Personal Protective Equipment (PPE)
- Identify Procedures and techniques of cleaning equipment
- Apply maintenance procedures

1.1. Cleaning requirements and methods

1.1.1. Definition of cleaning

Cleaning is the process of removing unwanted substances, such as dirt, infectious agents, and other impurities, from an object or environment. Cleaning occurs in many different contexts, and uses many different methods. Several occupations are devoted to cleaning.

1.1.2. Purpose of cleaning

It is used to remove dirt, dust, stains, bad smells, and clutter on surfaces. Purposes of cleaning agents include health, beauty, removing offensive odor, and avoiding the spread of dirt and contaminants to oneself and others.

1.1.3. Importance of cleaning

Sanitation and neatness play an important role in our day to day routine. It is important as it prevents Scabies, Schistosomiasis, Trachoma, etc can be spread due to eating contaminated food, drinking contaminated water or living in an unhygienic condition. Trash also spread bad dour which is difficult to tolerate. There will also be an accumulation of trash and dirt if clean measures aren't taken.

Cleanliness at the workplace benefits your business also. It helps to attract your clients or boss, which helps to increase your profits. We should not neglect the importance of cleanliness in our workplace because it affects the mental state of those who work there. People place a lot of importance on their appearance. An attractive appearance is a product of a healthy and clean appearance. Therefore, people should take care of their looks from time to time.

1.1.4 Cleaning requirements

The cleaning schedule contained within the Standard is designed to produce a clean and odor-free environment that is fit for purpose. This means that all surfaces are free from foreign matter such as dust, dirt, litter, cobwebs, fingerprints, streaks, stains, greasy marks and residues

1.1.5. General cleaning requirement

- Vacuum all carpets
- Empty trash, clear outside areas of all

- Remove all nails, tape, from walls. There should
- Be nothing left on the walls.

1.1.6. Cleaning Methods

Cleaning is one of the most important steps in the/cleaning and disinfecting /C&D process. The cleaning process can be executed as dry cleaning and/or wet cleaning. When done appropriately, cleaning alone can remove over 90 percent of microorganisms.

- **Dry Cleaning**

Dry cleaning involves the removal of any gross contamination and organic material (for example, soil, manure, bedding, and feed) from production areas or equipment.

- **Wet Cleaning**

Wet cleaning involves the use of water and soap or detergent.

- **Washing**

Following the removal of gross contamination areas or items should be washed with detergent. The washing process helps to further reduce the number of microorganisms and to remove any oil, grease, or exudates that may inhibit the action of disinfection

The following points for washing are recommended:

1.2. Components of cleaning

Cleaning is subjective and open to different interpretations. It is important to understand that when buying a commercial dishwasher there are factors which contribute in varying degrees to a required outcome. There are 4 basic components to cleaning

1. Contact time
2. Chemical
3. Temperature
4. Mechanical

1. Contact time

Contact time is perhaps the most crucial part of any washing or cleaning process as it applies to all facets of cleaning. It determines the time that a product or item is subjected to the influences of mechanical action (water jets), chemical action (detergents, surfactants, oxidants etc) and

thermal action (temperature). The outcome can then be used to determine a process, which can be cleaning, sanitizing, disinfecting or even sterilizing.

To determine the necessary contact time for a mechanical washing process you need to find a balance between applicable legislation, items to be washed and required outcome.

2. Chemical

The influence of chemistry on all aspects of cleaning is very complex. It not only refers to the detergents used, but the composition of the water used makes a difference, just as much as the product that needs to be cleaned. We are not chemists, so this explanation will minimize the use of chemical symbols and formulae's

First of all, the medium used for washing: water. Water contains certain mineral and organic constituents which influence the cleaning process. The higher the expectation of end results, the more significant the quality of water.

The role of water in the washing process is threefold. First, it has to dissolve and carry the detergents required to break down the soil; secondly, it is used as a mechanical means to remove the soil and provide a scrubbing action and finally, it is used to give a final finish to the item being cleaned and this can be either optical (clean glass) or physical (disinfection).

3. Detergents

The use of the correct detergent is often an underestimated factor in mechanical washing.

Getting it exactly right is critical. Examples of factors that cause negative reactions:

- The wrong detergent
- Incorrect dosage, either too little or too much
- Mixing of incompatible detergents
- Incorrect contact time
- Chemical passed its use by date
- Incorrect temperature

Two vital characteristics of a detergent used in a mechanical washing process are: it must be soluble in water and it must be low foaming. The first is obvious; the second would adversely affect the efficiency of the pumps.

4. Temperature

We are all aware of the influence temperature has on our lives and how dynamics can change dramatically with an increase or decrease in temperature. Of course the same applies to cleaning and in particular, mechanical washing.

Temperature plays a significant role in:

- **Removing soil** – If the wash water temperature is too high, then proteins can bake on. On the other hand, if the temperature is too low, then fatty substances will not be removed.
- **Cleaning** – High temperatures (80°C +) are required to disinfect
- **Chemical** – Certain chemicals operate only within a specific temperature range, others may change their composition or break down. We all know how chlorine evaporates from a pool quicker in summer than winter
- **Safety** – When washing at high temperatures, operators need to be protected. Their working environment also needs to be at a pleasant, workable temperature
- **Machinery** – Not only the operating temperature of the actual wash water but also the surrounding temperature plays a significant role on the reliability and life span of the equipment
- **Dynamics** – Spray patterns can change with varying water temperature, so can pump efficiency

Mechanical

The mechanics of cleaning not only relate to the actual washing machine, but also to the items that have to be washed. Cleaning smokehouse trolleys requires a totally different approach to washing crystal glasses.

Washing machines vary in size and function, depending on what they have to wash. However they all share one basic function and that is to provide the mechanical action required to clean an

1.3 Cleaning equipment

1.3.1 Definition of equipments

Equipments is defined as the items within the public area that are used, their by customers or staff. Example of equipments used by staff include:-buffet areas, kitchen equipments, etc.to keep the hotel clean and hygienic, various equipments and supplies are used. No work can be done without proper equipment. It is important that the housekeeper makes a careful selection of equipment based on necessity and suitability for use in a hotel industry, appropriate design and required size, rugged construction and finish, ease and availability of maintenance, low initial and operating costs, on-the-job tested performance, safety, and overall efficiency. Supplies should also be studied, and basic Procedures developed to use these supplies most effectively in maintaining desired standards of cleanliness.

There are many different types of cleaning equipment and each piece has a special purpose.

The cleaning equipment used depends on what areas a business has and what they are made of. Smaller businesses may only have domestic cleaning equipment (what you use at home) kept in a cupboard. Bigger establishments have commercial or industrial equipment because it is more powerful and is built for constant use. They may also have a purpose-built cleaning storeroom where equipment, cleaning chemicals and protective clothing is kept.

1.3.2. Types of cleaning equipment




A. Manual cleaning equipment

Equipments which help in the cleaning process by directly using manual energy of the employees



B. Electrical cleaning equipment

As the name depicts, this equipment requires electrical power to operate. They are operated either on AC power or on the battery. Some important electric equipment

Table 1.1 Manual and Electrical equipment

Item	Purpose
<p>Microfiber cleaning cloths and pads</p> 	<p>For general cleaning. Very small synthetic (not natural) fibers catch the dirt. No chemicals are required. Just rinse out after use.</p>
<p>Brooms</p>	<p>For sweeping dirt and other rubbish off floors and other surfaces, both inside and outside</p>
 <p>Buckets</p>	<p>Hold water and cleaning products when mopping or other cleaning. Mop buckets have rollers to squeeze water from the mop head.</p>
 <p>Cleaning cloths</p>	<p>For wiping and polishing wet or dry hard surfaces such as benches, furniture and washbasins.</p>

	<p>To warn people that cleaning is in progress or there is a cleaning hazard, such as wet floors.</p>
<p>Cleaning safety sign</p>	<p>For cleaning surfaces where there is dust, light dirt or cobwebs.</p> <p>Extender handles let you dust up high.</p>
	
<p>Dusters</p>	<p>For sweeping up small spills and collecting dust and dirt swept into a pile.</p>
	<p>Dustpan and brush</p>
	<p>For washing smooth floors such as tiles or vinyl with water after sweeping or vacuuming.</p>
<p>Mops</p>	




 <p>Scrubbing brushes</p>	<p>To scrub off dirt where it is hard to remove.</p> <p>Scrubbing brushes could include:</p> <ul style="list-style-type: none"> <input type="checkbox"/> carpet brush <input type="checkbox"/> sink brush <input type="checkbox"/> silk brush <input type="checkbox"/> wall brush.
 <p>Toilet brush</p>	<p>Used ONLY to clean toilets. Must NOT be used for anything else.</p>
 <p>Window squeegee mop</p>	<p>To clean windows.</p>

	<p>Wear when cleaning and handling chemicals to protect your hands.</p>
	<p>For putting food and other waste in before it is collected.</p>
	<p>A sink where you can fill and empty buckets and wash mops. It usually has a grate over the top to rest the buckets while they are being filled, and a chemical trap.</p>

Disposable gloves

Rubbish bin and heavy-duty bags

Cleaner's sink


	<p>Used on hard floor surfaces after cleaning to add shine and help protect surface. Some can vacuum at the same time.</p>
	<p>Wet and dry types. Backpack, cylinder and upright. Used to remove dust and dirt from carpets and other large floor surfaces. They can also be used on furniture and curtains.</p> <p>Wet vacuum cleaners can suck up liquid spills and are also used for wet cleaning of carpets.</p>
	<p>Used to wash large areas of hard floors, using revolving brushes, water and detergent. The dirty cleaning solution is sucked up under the machine. The floor is left clean and almost dry</p>

	<p>Hot water extraction machines (steam cleaning machines) suck up most of the dirty water from the carpet.</p> <p>There is also a dry foam machine. You spray on the foam, let it dry, then vacuum to pick up the dry chemical.</p>
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1. 4.Cleaning agents and supplies

Cleaning Agents are substances, usually in liquid form, that are used to remove dirt, including dusts, stain, bad smell and clutter in solid surfaces. Purposes of using cleaning agents include health, beauty, elimination of offensive odor, and to avoid the spreading of dirt and contaminants to oneself and others. Some cleaning agents can kill bacteria & other microbes and clean at the same time.

Table 1.2. Cleaning agents and supplies

Cleaning agents and supplies	Purpose & Proper Usage
	<p>All purpose cleaner used for cleaning all cleaning activities .</p>

 bleach	To clean stains
 Leather care	To polish leather
 metal polish	To polish metal surface
 furniture care	To Polish furniture surface
 Trigger spray bottles	Bottles can be filled with a cleaning solution that is sprayed on items to be cleaned. Some properties buy large containers of cleaning solution and then fill smaller bottles for employees use. This saves the housekeeping department money. Trigger spray bottles come in variety of sizes and shape. Many

	bottles are used to hold all-purpose cleaner or glass cleaners. Do not use a trigger spray bottle unless it is labeled with the solution/s name and instruction for its safe use. To clean, follow any special instructions that are listed on each container.
 Wood Polish	<p>To polish wood surface, leather and imitation-leather surfaces</p> <p>Spray it sparingly and evenly on the surfaces.</p>
 Insecticides	<p>To be used in fumigation and to eliminate insects and pests.</p> <p>In as much as the chemical is toxic, avoid spraying unto food containers and food items. Remove food within the affected areas during the fumigation.</p>
 Methyated Spirit	<p>It is a chemicals used for polishing all glass surfaces such as mirrors, windows, etc.</p> <p>This chemical is highly flammable and must never be used near fire or flame. It also has high degree of evaporation and should therefore be used in small area sparingly one at a time to avoid wastage.</p>

1.5 .Personal Protective Equipment (PPE)

1.5.1. Introduction

PPE is equipment that will protect the user against health or safety risks at work. Personal protection comes first for all household services that may need direct or indirect attention of human being. The protection items start from the clothing that people put on to the shields that are used around other parts of the body to protect any hazard that may exist. All the PPE in household services must be health approved and maintained in a hygienic state to avoid any further complication. Whether you are considering the same for commercial or personal use, personal protective equipment should always be given a priority.

1.5.2. Types of personal protective equipment

There are many types of personal protective equipment:

- **safety glasses**

Is the best way to protect your eyes from accidental splashes of cleaning fluids. They are made from Strong plastics and rubbers that make them comfortable to wear whilst giving you reliable protection. Goggles offer more protection when using chemicals as they have a surround that hugs your face, leaving no gaps for liquids to get in.



Fig. 1.1. Safety glasses

- **Hand Gloves**

Are a garment covering the whole hand. Gloves usually have separate sheaths or openings for each finger and the thumb

Cleaning staff should also use rubber gloves to protect their skin from burns and irritation. These are available in a range of lengths and thicknesses to offer different levels of protection.



Fig . 10. Gloves

- **Aprons:**

Apron is a garment that is worn over other clothing and covers mainly the front of the body. It may have several different purposes and is today perhaps most known as a functional accessory that protects one's clothes and skin from stains and marks. So are best suited to general cleaning duties such as dusting, polishing and vacuuming.



Fig 12. Apron

- **Footwear.** Footwear refers to garments worn on the feet, which originally serves to purpose of protection against adversities of the environment, usually regarding ground textures and temperature. Footwear in the manner of shoes therefore primarily serves the purpose to ease the locomotion and prevent injuries.
- **Facemasks** .facemasks are loose-fitting, disposable masks that cover the nose and mouth, such as surgical masks and nuisance dust masks. Facemasks are not approved by the National Institute for Occupational Safety and Health (NIOSH) protection against any regulated hazardous material.



Fig 13 Face masks

- **Hair net**

A net worn over the hair to keep it in place, Hairnet or something simply a net or cauls is small elasticized, fine net worn over long hair to hold it in place it is worn to keep hair contain



Fig. 14 Hair net

1.6. Procedures and techniques of cleaning equipment

1.6.1. Definition of Vacuum

A vacuum cleaner, also known as a sweeper or Hoover, is a device that uses an air pump, to create a partial vacuum to suck up dust and dirt from floors and from other surfaces such as upholstery and draperies. The dirt is collected by either a dust bag or a cyclone for later disposal

Vacuuming is slowly will allow your machine to suck up more dirt and dust, and ultimately gate your rack and carpets match cleaner, slow vacuuming allows the brush to agitate the carpet properly and suck up the unclean bits that emerge



Fig 15 Vacuuming carpet

1.6.1 Vacuum accessories

A. Crevice Tool With its skinny shape and angled tip, this one gets into the tight spots: corners, along baseboards, around radiators or vents, between sofa cushions, and more. You can also use it for cleaning refrigerator coils or de-linting the inner workings of your dryer.

B. Dusting Brush Round with long, soft bristles, it helps whisk windowsills, bookcases,

framed art, lampshades, and blinds. If your vac is equipped with variable suction, you can also use it for more delicate tasks, such as cleaning around knick-knacks.

C. Upholstery Tool This attachment is wide and sometimes has a lint-catching fabric strip perfect for coaxing dust from sofas, chairs, mattresses, and cushions.

D. Extension Wand This gives you more reach, and nabs dust dangling from high ceilings and corners or buried deep behind appliances. Or try this neat trick: If you've dropped something lightweight in a spot you can't reach, stretch a piece of nylon pantyhose over the end of the wand, secure it with a rubber band, and use it as a tool to retrieve your item.

E .Motorized Brush Head Sometimes called the "power nozzle," this large attachment has a rotating brush to clean carpets more like an upright. Some allow you to turn off the rotation, so you can use it on bare floors, too.

F. Bare Floor Brush This wide narrow tool has short, stiff bristles for removing fine dust and grit from hardwoods and tile.

G. Extra helpers: You can tackle most vacuuming tasks with the usual suspects above, but some manufacturers offer innovative tools tailored to tricky jobs. Some of these might come with the vacuum, and others you'll need to buy separately

H. Power or Turbo Brush Similar to the canister's motorized brush head but smaller, this tool offers rotating bristles and a compact size that are useful on stairs and good for deep-cleaning upholstery, mattresses, or car interiors. Some have rubber parts to better grab and remove pet hair stuck to fabrics (but skip using it on delicate silk).

F .Mattress Attachment Designed to remove even more dust and allergens from mattresses, some have textured pads, extra width, or a unique shape for the job.

G. Ceiling Fan and Blind Attachments These simplify the challenge of certain chores: Getting to the top of fan blades and between blinds. You can also try tackling them with the standard dusting brush.

I .Pet Groomers Sure, you can vacuum your pup's favorite perch, but you can also vacuum your dog.



Fig . 16. Accessories of Vacuum Cleaner

A. Techniques of use vacuum cleaner

1. Wear PPE
2. Prepare material needed:
 - a. Vacuum cleaner
 - b. Vacuum accessories
3. Ask your trainer assistance if needed.
4. Check the bag and filter daily and clean or replace them, as required
5. Check the cord for fraying and the plug for loose connections
6. Handle the vacuum cleaner carefully to prevent damage, e.g. unplug it by pulling on the plug, not on the cord.
7. Use even stroke to cover the entire area
8. Start vacuuming at the furthest point from exists
- 9 .Move light furniture and vacuum beneath it.
10. Avoid hitting furniture and baseboards, this could cause damage

11. Look for and pick up small items (e.g. bottle caps, pins) with your hands not the vacuum cleaner

Step12. Use appropriate attachments for surfaces, for example:

- a. Crevice tools for ledges, corners, and furniture corners
- b. Small brush for furniture, upholstery, and drapes
- c. Floor brush for hard-surfaced floor
- d. Power nozzle for carpets; be sure to adjust the height to the carpet pile

Step13. Clean the vacuum clear after used

- e. Wipe hose power nozzle
- f. Remove dust balls, strings and hairs from attachment

B. Procedures of vacuum

1. Check the vacuum cleaner for safety.
2. Remove dirt from room corners and carpet edges.
3. Plug the vacuum into the outlet nearest to the guestroom door.
4. Vacuum all areas.
5. Unplug the vacuum, wind the cord correctly, and return the vacuum to the housekeeping cart.

For each step, a brief explanation should be written that describes a safe and standard method for performing that step. The how-to portion for step one, “Check the vacuum cleaner for safety,” could be:

1. Before vacuuming the first room of the day, check to make sure the vacuum cleaner bag is empty.
2. Replace or empty the vacuum cleaner bag if it is full.
3. Immediately remove knots and tangles from vacuum cords, since they can cause electrical short circuits
4. Immediately turn off equipment that sparks, smokes, or flames.
5. Take vacuum cleaners that need repair to the housekeeping department.

•The safety points that could be listed when checking the vacuum might be:

1. Safety must be a top concern at all times. If anything about your equipment looks unsafe, report it to your supervisor and have it repaired before you use it.
2. Do not use the vacuum if the cord is damaged. You could be hurt, or a short circuit could start a fire. Be careful not to trip on the vacuum cleaner cord.
3. Never use electrical equipment, such as your vacuum cleaner, when standing in water or when your hands or clothes are wet.

Maintenance procedures

Maintenance procedures that should be considered when preparing the planned maintenance program include:

- 1 .Carrying out repairs needed when plant or equipment breaks down;
- 2 .Predicting from a history of breakdowns, the life expectancy of parts, bearings, etc., the tasks to be carried out and the frequency to be established
3. Checking the condition throughout the plant of equipment, its running hours, readings of different responses (e.g. vibration, temperatures, current, etc.);
4. Monitoring the operating cycle and, where appropriate, seasonal shutdowns of plant, equipment (e.g. production process, 24-hour duty, etc.).

Self-check 1

written test

Part –1

Directions: True or False

Q1. Footwear refers to garments worn on the feet.

Q2. Vacuum cleaner is a device that uses an air pump, to create a partial vacuum

Directions: choose the best answer

Q1. All battery-operated equipment is adequately charged using (3 point)

A. After use B. during operate C. before use D, non-use

Q2. For drying damp surface which kind of drying clothes is needed?

A. Lint free B. rough C. silky fiber D. wool fiber

Directions: Answer all the questions listed below.

Q1. What is Public area?

Q2. What are two types of cleaning methods?

Q3. Write the components of cleaning

Q4. What is Equipments?

Q5. Write the purpose of cleaning agent?

Unit Two: Clean furnishing and fixtures

This unit to provide you the necessary information regarding the following content coverage and topics:

- Perform cleaning
- Position Furnishings and fixtures
- Clean and storing equipment
- Carry out routine maintenance

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Perform cleaning
- Perform positioning of furnishing
- Perform clean and storing equipment
- Apply of clean and storing equipment
- Understand of carry out routine maintenance

2.1 Performing cleaning

2.1.1. Definition of Furniture

Furniture refers to movable objects intended to support various human activities such as seating (e.g., stools, chairs, and sofas), eating (tables), storing items, eating and/or working with an item, and sleeping (e.g., beds and hammocks). Furniture is also used to hold objects at a convenient height for work (as horizontal surfaces above the ground, such as tables and desks), or to store things (e.g., cupboards, shelves, and drawers). Furniture can be a product of design and can be considered a form of decorative art. In addition to furniture's functional role, it can serve a symbolic or religious purpose. It can be made from a vast multitude of materials, including metal, plastic, and wood. Furniture can be made using a variety of woodworking joints which often reflects the local culture.

2.1.2. Cleaning Furniture

How you clean your wood furniture depends on whether it is oiled, painted, or polished affect how it is cleaned. You have to be sure that you know the surface before you clean it. For example, some wood furniture is lightly lacquered and will not absorb oil, while other woods, particularly teak and rosewood, have no finish and benefit from a yearly application of furniture oil.

Furniture items upholstery

Is the work of providing furniture, especially seats, with padding, springs, webbing, and fabric or leather covers. The word upholstery comes from the Middle English word upholder, which referred to an artisan who held up their good.

- **A chair:** is a type of seat its primary features are two pieces of a durable material, attached as back and seat to one another at a 90° or slightly greater angle.
- **Ottomans:** upholstery: a low upholstered seat without a back or arms that typically serves also as a box, with the seat hinged to form a lid.



Fig 17. Ottoman upholstery

- **Luggage rack**

A shelf for stowing luggage, typically overhead, Luggage rack keeps your suitcase at a handy height.



Fig 18 Luggage drawer

- **Sofa**

also known as couch , futon, or settee is a piece of furniture for seating two or three people in the form of a bench, with armrests, which is partially or entirely upholstered, and often fitted with springs and tailored cushions.

- **A bedside table**

Is a nightstand, alternatively night table, day stand or bedside cabinet, is a small table or cabinet designed to stand beside a bed or elsewhere in a bedroom. Modern nightstands are usually small bedside tables, often with one or sometimes more drawers and/or shelves and less commonly with a small door.



Fig 19. Bedside table

- **Cupboard**

The term cupboard was originally used to describe an open-shelved side table for displaying dishware, more specifically plates, cups and saucers. These open cupboards typically had between one and three display tiers, and at the time, a drawer or multiple drawers fitted to them.



Fig 20. Cup board

- **Dressing cabinet**

A dresser is a piece of furniture with several drawers that's used for storing clothes or other things.



Fig 21. Dressing cabinets



Fig. 22. Furniture items

2.1.2. Definition of Fixture

Fixture is personal property permanently attached to the structure and something that is fixed or attached (as to a building) as a permanent appendage or as a structural part. a plumbing fixture. : a device for supporting work during machining.

Fixture item

- **Door, window and locks**



Fig. 23 . Door, window and lock

- **Telephones**

Telephone is a system used to send speech or data over distances using a device called a telephone that functions as the transmitter and receiver.



Fig. 24. Telephones

- **Television**

Is a system for converting visual images (with sound) into electrical signals, transmitting them by radio or other means, and displaying them electronically on a screen.



Fig 25 . TV

- **Mini –bar**

A small refrigerator, typically an absorption refrigerator in room or cruise ship stateroom. The staff fills it with drinks and snacks for the guest to purchase during their stay. It is stocked with a precise inventory of goods, with a price list.



Fig 26.mini bar

- **Heating equipment**

A mechanism for maintaining temperatures at an acceptable level; by using thermal energy within a home, office, or other dwelling. Often part of an HVAC (heating, ventilation, air conditioning) system.



Fig 26. Heater

- **Air conditioner**

The term "air conditioning" refers to any form of "Heating, ventilation and air conditioning", an air conditioner is a system or a machine that treats air in a defined, usually enclosed area via a refrigeration cycle in which warm air is removed and replaced with cooler air.



Fig 29. Air conditioner

- **Lighting fixtures**



Fig 30. Lighting fixtures

2.2 Positioning Furnishings and fixtures

Arranging furniture with a TV can be a daunting task. When you're faced with an empty room, filling it in a way that is both practical and aesthetically pleasing around your electronics can seem like an overwhelming task. But over the years, interior designers have recognized a number of simple, easy-to-apply principles that work to make your TV look good in your living room. Just follow these common-sense rules and you'll find that arranging furniture—with or without a TV in the picture.

2.2.1 Consider Popular Furniture Layouts

Simplify your options by considering timeless living room layouts that designers gravitate to for the most beautiful rooms. Here are a few living room furniture arrangement examples.

- **Symmetrical layout:** A symmetrical layout works in any size or shape room because it visually balances the space. Two sofas facing one another separated by a table is a symmetrical layout. A sofa flanked with matching side chairs is considered symmetrical.
- **Floating layout:** If you have a living room with many windows but not enough wall space to anchor your furniture, opt for a floating furniture layout. Float your furniture a few feet away from the walls to create an island in the center of the room with a TV mounted on one wall.
- **L-shaped layout:** An L-shaped living room and dining room combination is considered an awkward space and presents its own set of challenges, such as less wall space for furniture and TV placement. There are usually two walls you can use for furniture and TV positioning; the sofa sits on the long wall and the TV can be positioned on the wall directly in front of the sofa.
- **Layouts for irregular rooms:** Narrow living rooms, spaces with nooks and crannies, or fireplaces on an angle—all are considered awkward or irregular-shaped rooms. The key to arranging furniture in awkward living rooms is to create zones using furniture on area rugs. You can also anchor a zone with an oversized statement piece like a dramatic floor lamp.
- **Layouts for long, narrow rectangular living rooms:** You'll have two long walls to work with so it's common to place a sofa on one wall and the TV on the opposite wall, whether it's mounted or placed on a stand.

2.3. Cleaning and storing equipment

Is a piece of furniture with horizontal shelves, often in a cabinet, used to store books or other printed materials? Bookcases are used in private homes, public and university libraries, offices and bookstores.

Start by removing everything on the shelves. But do this with a purpose to make your job easier later. Set aside any décor items and give them a good cleaning and dusting to remove any built-up dust and grime. Give each book a wipe down with a damp cloth or dust rag.

To Clean Book shelves

- Dust the case. Once a week, wipe the top and sides of the bookcase with a microfiber cloth.
- Dust the books.
- Tidy up.
- Remove everything from the shelves.
- Clean the bookcase.
- Clean books individually.
- Organize them.



Fig 26 Book case

• A coffee table

Coffee table is a style of long, low table which is designed to be placed in front of a sofa or upholstered chairs to support beverages, magazines, books, decorative objects, and other small items to be used while sitting, such as beverage coasters.



Fig 27 coffee table

- **Tables**

A table is an item of furniture with a flat top and one or more legs, used as a surface for working at, eating from or on which to place things

Fixture items

- Door, window and locks
- Telephones
- Television
- Heating equipment
- Air conditioner
- Lighting fixtures
- Mirror

Picture is a visual capture of an object. Pictures can be created using devices such as a digital camera, scanner, smart phone, or are works of art created on the computer.

The photograph of a man setting up pictures shown here is a good example of something that can be considered a picture.



Fig 28 picture

- **Frame**

A frame is a decorative edging for a picture, such as a painting or photograph, intended to enhance it, make it easier to display or protect it. The frame along with its mounts protects and often makes the art look better. Art work framed well will stay in good condition for a long period of time



Fig 29 Farme

2.4 Carrying out routine maintenance

Carry out or arrange routine maintenance according to enterprise procedures Routine maintenance : Every organization should have a maintenance schedule for items of equipment, which specifies when each item of equipment should be checked for maintenance. It is important that this schedule includes cleaning equipment and that all items of cleaning equipment are

regularly checked for damage. Sub-standard cleaning equipment increases the risk of a breach in the organization's hygiene standards. Identify equipment faults and report them according to enterprise procedures .Reporting damaged equipment .If you notice something wrong, don't use the equipment. Report it to your supervisor immediately. Some examples of things you might notice are:

- Frayed electrical cord
- broken switch
- cracked hose on the vacuum cleaner
- screws coming loose or missing
- rattles or strange noises in the equipment
- smells, smoke or sparks coming from the equipment
- warning light or temperature gauge not working
- broken accessories
- broken handles
- Lack of power in an electric machine.

You may need to fill in a workplace report form. Or you might have to tell your supervisor about the problem, and they will fill out the form.

2.4.1 Safe use of cleaning tools and equipment

Safe Use these risks can vary greatly. Above all, what matters is that whoever has to use any tool or piece of equipment as part of their job does so with care. To ensure safe use, employers must train staff and provide suitable information. They must also check that staff has the appropriate qualifications to use intricate tools and equipment. In addition, as part of their health and safety strategy employers should offer refresher training. This isn't necessary for basic items, but when certain tools and equipment change, refresher training improves skills and reminds users of safety procedures.

2.4.2 Correct Maintenance of Tools and Equipment A further part of a health and safety strategy is to maintain tools and equipment regularly. This helps to identify safety problems before they become a serious hazard. Only qualified people should carry out the maintenance. They should also keep records of their inspections.

Self-Check	Written Test
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PART-1

Directions: Answer all the questions listed below.

Say True or False

Q1. Picture is a visual capture of an object

Q2. Dust the case. Once a week, wipe the top and sides of the bookcase with a microfiber cloth.

Part -2

Directions: Answer all the questions listed below

Choose the best answer

Q 1 .One of the following is not fixture items?

A. Door, window and locks

B. Telephones

C .Television

E. none

Q2.Which one of the following is furniture items?

A. chair

B.Basin

C.Broom

D.all

Operation sheet 1	Steps in cleaning different areas
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Techniques of cleaning different areas:-

Step.1. wear PPE

Step.2. Move furniture or other items as directed using care not to scratch surfaces.

Step.3. Take more time vacuuming carpeted areas to allow pick up and also be more Thorough in covering the area wall to wall.

Step.4. Promptly address spots on carpet as soon as possible to reduce the Chances of it becoming a stain.

Step.5. Inspect and dust mop hard floor surfaces taking note as to the type floor (Vinyl Composite Tile with finish or granite as an example). Use a microfiber dust Mop when possible and be sure to sweep up debris.

Step.6. Place appropriate warning signs for any wet work being performed.

Step.7. Inspect and remove gum, heel marks and other abrasions when possible Before damp mopping.

Step.8. Damp mop utilizing a neutral detergent that will not damage finish or stone Surfaces which can be susceptible to harsh acids or alkalis.

Step.9. Clean and return all equipment to storage area for the next day's use.

Operation sheet 2	Steps in cleaning different areas
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PART- 1

Steps in cleaning furniture

Step-1. Removes dusts from furniture surface

Step-2. Clean the furniture with dusting clothes

Step-3. Apply cleaning agent –furniture polish

Step-4. Use polishing cloth and shine the furniture

PART - 2

Steps in cleaning fixture

Step-1 removes dusts from fixture surface

Step-2 clean the fixture with dry duster

Step -3. Apply cleaning agents

- ✓ window cleaning using for glasses and mirrors
- ✓ dry cleaning chemical for electrical fixture
- ✓ furniture polish using for polished furniture

LAP Test	Practical Demonstration
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Name: _____ Date: _____

Time started: _____ Time finished: _____

Instructions: Given necessary templates, tools and materials you are required to perform the following tasks within 3 hour.

Task 1- clean furniture

Task 2- Clean fixture

Task 3- Furniture items upholstery

Unit Three: Clean and Maintain Food Serving Area

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Dispose waste food and litter
- Cleaning floor, surfaces, and cooking areas
- Food storage area
- Avoid moisture on floor, shelves and cabinets

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Apply dispose waste food and litter
- Perform cleaning floor, surfaces, and cooking areas
- Identify food storage area
- Avoid moisture on floor, shelves and cabinets

3.1 Dispose waste food and litter

Cleaning and maintaining floors in food service areas can be particularly daunting. The challenge is compounded because food service floors to help address these issues, Powr-Flite offers the following tips and suggestions on keeping f properly.

- Floors which are typically quarry or ceramic should be sealed with a low-slip or anti-slip coating to foster proper sanitation and reduce the possibility of a slip-and-fall accident.
- All floor care work should be performed before food handling/processing equipment is cleaned; this helps prevent floor soils and debris from becoming airborne and landing on workstations or equipment.
- Mops, buckets, squeegees, chemicals, as well as all floor care equipment should be stored off the ground on shelves or racks. This helps keep the equipment clean and deters pests “Many food service kitchens now use approved anti-fatigue mats to help prevent slip-and-fall accidents and worker fatigue,” says Mike England, a cleaning expert and product manager with Powr-Flite. “It is very important that these mats be cleaned and sanitized at closing, allowing them to air dry before the facility reopens.”

Recycling

Recycling refers to both the direct reuse of used products (e.g. used clothing and functioning parts removed from used vehicles) and material recycling, that is the recovery of raw materials from waste (e.g. production of new glass from fragments, the melting of scrap iron and the production of recycled building materials from construction waste). Down cycling refers to the transformation of waste to materials of lower quality than the initially used material, composting

One of the most common and sustainable methods of food waste disposal, composting is when food waste naturally decomposes and creates fertilizer which can be done by businesses and individuals

1. Liquid waste

Liquid waste can be defined as such Liquids as wastewater, fats, oils or grease (FOG), used oil, liquids, solids, gases, or sludges and hazardous household liquids. These liquids that are hazardous or potentially harmful to human health or the environment. They can also be discarded commercial products classified as “Liquid Industrial Waste” such as cleaning fluids or pesticides, or the by-products of manufacturing processes. There are general regulatory

requirements relating to waste, additional regulations apply to generating, storing, transporting, treating and disposing of hazardous and liquid wastes.

2 . Food solid waste

Sustainable and important source for certain industrially chemicals can be obtained from the large amounts of the generated wastes in the world. Food residues and waste such as kitchen refuse, garbage and swill [18] are described; generally; the by product and as solid wastes of food. Such wastes are produced from the processing, cooking, distribution, production, and consumption of food. However, food wastes and their definition are greatly varied from cities and countries to other cities and countries. Food wastes; in the European Union; are defined as “raw or cooked of any food substances that are discarded, or intended or required to be discarded”. On other hand, the (EPA) U.S. Environmental Protection Agency defines the food wastes as “Un-eaten foods and food preparation wastes from residences and commercial establishments including restaurants, grocery stores, and produce stands, institutional cafeterias and kitchens, as well as industrial sources such as employee lunchrooms.” Furthermore, “Food loss” and “Food waste”, in the United Nations, are recognized differently. The term “Food losses” refers to the decrease in food quality and/or quantity. On the other hand, the term “food waste” refers to the food losses due to retailers’ and /or consumers’ behavior [19]. However, food wastes include the uncooked raw materials, wasted foodstuffs, and also the edible materials from groceries or the wet market.

3.Organic waste streams

are produced in the food and beverage industry, paper industry, agriculture, and households.²¹ Currently, many producers of organic waste streams pay for treatment or disposal of these wastes during which the energy content of the waste stream is lost.

4. Hazardous waste.

Food Wastes may be unsafe because of damaged containers or because the refrigerator or freezer was without power for a few days. As food waste spoils or decays, it can be a health hazard and can attract rodents and other vermin. Take these steps to dispose of food waste:

- Do not keep any food that may be spoiled or contaminated, including:
- Food from refrigerators and freezers, including catsup, mustard, pickles, jelly, sandwich meat, milk, juices, etc

- Dry food in damaged packages.
- Do not keep any household medicines that are spoiled or contaminated.
- Place food waste and other waste that rots or decays into plastic bags and place them in a designated area for separate collection.
- When in doubt, throw it out! Take the following steps to clean refrigerators and freezers
 - Remove everything from the refrigerator or freezer.
- Use paper towels or rags to wipe up spills and leaks and dispose of them with the food waste. • Wash out the refrigerator or freezer with a strong bleach solution. Use 1½ cups of bleach in 1 gallon of water. Use latex or rubber gloves if you have sensitive skin that may be irritated by the bleach solution.
 - Wash out the appliance with warm, soapy water.
 - To remove odors, wipe out the appliance with a mixture of water and baking soda, or keep a box of baking s

3.2. Cleaning floor, surfaces, and cooking areas

3.2.1 Cleaning floors and surface

Floors and surfaces get dirty very quickly. They can get slippery and dangerous, so they must be swept, washed and sanitized at least once a day. Sometimes they might need to be cleaned more often, such as when there is a spill. Floors in areas such as a reception area or restaurant may not get as dirty as a kitchen, but they still need to be cleaned daily. Different floor surfaces require different methods. Hard surfaces need sweeping, mopping and polishing, while carpets need vacuuming and shampooing

3.2.2. Cleaning of cooking areas

Food preparation surfaces should be cleaned and sanitized daily. Areas such as tabletops and kitchen counters can be sprayed with disinfectant and wiped down with a clean, soft cloth. All-purpose or kitchen specific surface cleaners such as Domex Multi-Purpose Cleaner is our recommended product for this task.

3.2. Food storage area

Storing food the right way can be a great help in ensuring a household's food security. This section discusses the importance of food storage and the different ways in which households can rightly store different types of foods. Food storage broadly refers to the different means through which food can be kept for longer periods without the food spoiling. The shelf life of a food is the length of time a food remains safe and fit for human consumption. It is essential to store food properly to ensure the following:

Food remains in good condition for as long as possible

Food is protected from flies, dust and other organisms that can spoil and/or contaminate food

Food is protected from organisms like insects and rats that eat and spoil food. For instance, proper storage of grains protects it from rats and aphids which eat and spoil maize

Reduction in post-harvest food losses

General guidelines for food storage Foods should be stored differently on the basis of how fast they will spoil or develop off flavours. Foods can be categorised into 3 groups:

1. Perishable (e.g. milk, meat, raw fish)
2. Semi-perishable (e.g. vegetables and grains)
3. Non-perishable foods (tinned or dried food)

1. Perishable foods: e.g. eggs, milk, cream, fresh meat. These have the shortest shelf life and must be used within a few days. These should be stored in a clean cool place. In the absence of refrigerators, such foods can be placed in clean containers, saucepans or pots. The containers can then be placed in a basin of cold water covered with a clean piece of cloth. In all circumstances, milk and meat should be consumed within 2 days.

2. Semi-perishable foods: e.g. bread, cakes, fresh fruit and vegetables. Breads and cakes should be stored in a bread bin or tin. Fruit and vegetables may be stored in a rack or basket. When put in storage, care should always be taken to remove and discard the particular foods that start showing signs of spoilage so as to avoid cross-contamination.

Non-perishable foods: e.g. dry, bottled and tinned foods can be stored in a cupboard on their own or in airtight containers

Further food categories and their storage methods. The recommended storage conditions for foods often vary; the variations even differ for the same foods depending on the freshness or dryness of the particular food. Storage of cereals, bread, flour, and rice

- Bread needs to be stored in its original package at room temperature. It should be used within 5 to 7 days or else it will grow moulds (a sign of spoilage)
- Cereals - depending on the quantities and level of dryness - may be stored at room temperature in tightly closed containers to keep out moisture and insects. Properly dried cereals packaged in sacks can be stacked on racks in a dedicated food store. Due attention should be taken to keep out rodents (rats) that normally feed on stored grain
- Raw rice can be stored in closed containers at room temperature and used within one year. Once cooked, rice should be eaten immediately in the absence of refrigeration

Storing fresh vegetables

Proper storage of fresh vegetables helps to maintain their quality and retain nutrient value. Most fresh vegetables need to be stored under low temperatures in areas which are neither humid nor damp. If available, fresh vegetables can be stored in a clay pot fridge.

1, The proper storage of food is a critical part of maintaining high catering standards, especially in settings such as care homes, where healthy meals are a key element of care. Food beverage

- Department staff in such settings should observe a strict regime of stock control that includes the removal of out-of-date foods, Shelves and cabinets. All food should be prepared or cooked properly and displayed or served hygienically at an appropriate temperature.

Domiciliary care staff who cook food for people in their own homes should implement the principles of good food preparation and safety as far as is possible in such a setting.

As well as good food hygiene practice, the cooking, storing and serving of food at a safe temperature is the best way to prevent food poisoning incidents.

3.4 Avoid moisture on floor, shelves and cabinets

Moisture is the presence of a liquid, especially water, often in trace amounts. Small amounts of water may be found, for example, in the air (humidity), in foods, and in some commercial products. Moisture also refers to the amount of water vapor present in the air.

When hot water runs through pipes and condensation causes the pipes to drip a little tiny bit of water on your basement floor, this resulting water is an example of moisture.

- Sealing all openings to prevent humid air from getting inside.
- Minimizing humidity of the air.
- Changing the surface of your floor.
- Raising the overall room temperature.
- Improving the circulation of air across the floor.

Self-Check -1	Written Test
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PART -1

Directions: Say True or False

1. Moisture is the presence of a liquid, especially water, often in trace amount
2. Food is protected from flies, dust and other organisms that can spoil and/or contaminate

PART- 2

Directions: Answer choose the best answer

Q1 which one of the following proper storage of food is a critical part of maintaining high catering standards?

- A , Stock control
- B, Removal of out-of-date foods
- C, Check Shelves and cabinets
- D , All

Q2 One of the following is false the Cleaning and maintaining floors in food service areas can be particularly?

- A, Unhygienic
- B, Cleaning and maintain
- C keep staff and guest health
- D. None

PART- 3

Directions: Answer filling the blank

- Q1. Storing food the right way can be a great help in ensuring a household's food security
- Q2. Recycling refers to both the direct reuse of used products

PART-4

Directions: Answer all the questions listed below.

- Q1 which kind of personal protective equipment is used for cook cleaning? (5 point)
- Q2 Foods can be categorised into 3 ?

Unit Four :Apply Pest Control Activity

This unit to provide you the necessary information regarding the following content coverage and topics:

- Pest management framework
- Types of pests
- Precautionary measures to prevent the entry of insect
- Methods of pest control
- Consultative arrangements for pest management
- Inspecting and maintaining facilities

This guide will also assist you to attain the learning outcomes stated in the cover page.

Specifically, upon completion of this learning guide, you will be able to:

- Understand pest management framework
- Identify types of pests
- Use precautionary measures to prevent the entry of insect
- Use methods of pest control
- Consultative arrangements for pest management
- Inspecting and maintaining facilities

4.1 Pest management framework

4.1.1. Definition of pest

Pest is any organism that spreads disease, causes destruction or is otherwise a nuisance. Some examples of pests are mosquitoes, rodents, and weeds. Not all insects are pests. Many different kinds of insects eat other insects and are beneficial species

Guests will be upset if they find pests anywhere in the premises. Pests can cause discomfort and also spread diseases. Your workplace will have procedures for dealing with pests. Look out for pests and tell your supervisor if you see any signs of them.

If you are cleaning guest rooms, you may be able to spray flies, ants or silverfish with an environmentally friendly insect spray. But only use a small amount and wear gloves and a mask.

PMP pest management agencies include pesticide supervision and management institutions, pest control organizations and pesticide residue detection organizations

4.1.2. Duties of each Department:

Agricultural committee: Being responsible for the agricultural development planning and related agricultural affairs.

Industrial and Commercial Bureau: being responsible for the management of pesticides in trading.

Quality Supervision Bureau: being responsible for the management of pesticides in production.

Institute for the Control of Agrochemicals: being responsible for the application, use, supervision and management of pesticides as well as the formulation or participating in the formulation of pesticide safe use and the industry standard of the pesticide quality and pesticide residue and related affairs.

Institute of Law Enforcement, Pesticide Management Station: being responsible for the market supervision and management of agricultural chemicals.

Township Integrated Agro-tech Service Center: coordinate and assist in related law enforcement and the technical departments in the publicity, training and instruction on pesticide management and comprehensive pest management techniques.

4.2 Types of Pests

Most organisms are not pests. A species may be a pest in some situations and not in others. An organism should not be considered a pest until it is proven to be one.

Categories of pests include

- Insects, such as roaches, termites, mosquitoes, aphids, beetles, fleas, and caterpillars.
- Insect-like organisms, such as mites, ticks, and spiders,
- Microbial organisms, such as bacteria, fungi, nematodes, viruses, and mycoplasmas,
- Weeds, which are any plants growing where they are not wanted,

2.4.1. Common Pests and Their Control

Fleas: These are common nuisance. These thrive in dark, humid places and feed on organic matter, including the fur of adult fleas.

Eradication: On finding flea infestation, the property should be sprayed with an insecticide that will kill adult fleas, their eggs, larvae, and pupae. Pest-control experts should be called in to help with the problem.

Lice: These insect pests are attracted to human hair. They are easily passed on from one person to the other on close contact. In hotels, they may be left on pillows and upholstery and be easily passed from one guest to the other. Lice cause irritating bites on the scalp and the scratching due to it may even lead to infection.

Control: To prevent head lice, pillowcases and head-rest covers on chairs should be changed and cleaned frequently. Headboards should be wiped daily.

Eradication: In case of an infestation, the person should use specially medicated shampoos for lice and others should not use the infested person's personal belongings such as combs or brushes, towels and clothes.

Moths: Most of the moths that invade human habitations such that we may consider them pests belong to the families Tineidae and Pyralidae. Some species damage clothing, carpets, and other furnishings. Others are common pests that attack stored food products

Mollusks, such as snails, slugs, and shipworms, and Vertebrates, such as rats, mice, other rodents, birds, fish, and snakes. And are often found in houses, hotel kitchens, bakeries, grain stores, and warehouses - anywhere that food is stored, especially dried foodstuffs such as grains,

4.3 Precautionary measures to prevent the entry of insect

Prevention: this may be a goal when the pest's presence or abundance can be predicted in advance. Continuous pests, by definition, are usually very predictable. Sporadic and potential pests may be predictable if you know the circumstances or conditions that favor their presence as pests.

Suppression: This is a common goal in many pest situations. The intent is to reduce the number of pests to a level where the harm they cause is just about acceptable. Once a pest's presence is detected and control is deemed necessary, suppression and prevention are often joint goals. The right combination of control measures can often suppress the pests already present and prevent them from building up again to a level where they are causing unacceptable harm.

4.3.1. Precautionary

- Significant and potentially life-threatening illnesses can be transmitted by insect and other biting vectors.
- Wear protective clothing (e.g., long sleeves, trousers, and socks) as a first line of defense.
- Treat clothing with permethrin by fully saturating the fabric and allowing it to air dry; this will increase the protective level of clothing by repelling flying insects (mosquitoes, flies) and killing crawling arthropods (ticks, mites, fleas).
- Reapply repellent frequently and after strenuous activity or swimming.
- Avoid combination repellent-sunscreen products because the effectiveness of the sunscreen may be diminished.
- Apply sunscreen before repellent, allowing the sunscreen to fully dry.
- Know what insects are prevalent, what time of day they are active, and where they can be found. In some locations, precautions may need to be employed 24 hours/day due to multiple threats.
- Do a full body check for ticks during and after outdoor activity and at the end of each day; promptly remove any ticks found.
- Sleep in rooms with intact screens, bed nets, or air conditioning.
- Use an insecticide spray, vaporizer, or coil to kill stray insects in sleeping quarters.

Personal Protective Measures

- Wear clothing that covers as much skin as practicable, especially when walking through brushy vegetation.
- Wear long, light-colored pants tucked into socks when traveling in an area with risk for tick-borne diseases; light-colored clothing makes it easier to spot ticks.
- Apply a repellent to all exposed, non sensitive areas of the body. Frequent application ensures continuous protection. When both an insect repellent and sunscreen are used, apply the sunscreen first, letting it dry completely, then apply the repellent.

4.3. Methods of pest control

Pest control services use a variety of approaches to deal with infestations, but these can be sorted into three main types of pest management, which we will explain in detail below.

I. Physical

Physical pest control involves the trapping and killing or removal of pests to remove them from an environment. It may also involve putting up physical barriers and ‘pest proofing’ premises to stop pests from returning or entering in the first place. common examples of physical pest control include removing or destroying nests, blocking holes, windows or doorways, temperature control methods to kill pests, or setting traps to catch pests and then remove them from the area. In farming, methods such as field burning and trap cropping are also common physical control methods.

Advantages

- The biggest advantage of this kind of pest control method is that it doesn’t involve any kind of dangerous chemicals that can have an impact on the environment or an individual that accidentally comes into contact with a substance used for pest control
- These methods are also usually environmentally friendly
- Physical pest management is also a method that pests cannot develop any kind of resistance to, which means its an approach that will always be as effective as possible

Disadvantages

- A key disadvantage of physical pest control that involves trapping is that many people believe that it is inhumane to trap animals and remove them from their natural habitat, even if this is done with health and safety in mind
- Physical pest control that involves killing pests is also considered to be inhumane, particularly when they are rodents or larger creatures
- On a practical level, if you have a large infestation then physically removing all of the pests will be a very tricky and time-consuming task, so its effectiveness is not as high as other methods
- This method isn't also a very reliable approach to stopping pests from returning to their original infestation site

I. Chemical

Chemical pest control methods are the most widely used approach to pest control. They are also commonly used to control weed infestations and diseases in crops .pesticides are the name used to describe chemical pest control substances, which usually poison and kill the pest that consumes or is exposed to them. These may be used in combination with physical traps or just be left out in places where pests are known to be. Only qualified pest control technicians can and should have access to chemical pesticides, as these substances are toxic and can be incredibly harmful if ingested by a human. another chemical pest control method is ultra-low volume (ULV) fogging, which is used to combat insect infestations and spreads small amounts of insecticide. On the opposite end of the scale, fumigation is an extreme chemical pest control method that involves sealing a building and filling it with pesticide to annihilate any pest on the premises.

Advantages

- The main advantage of chemical pest control is that it is very effective and yields relatively fast results when it comes to removing pests
- Pesticides are also quite a cheap method of pest management, with very weak substances available to purchase for people without pest control qualifications
- Chemical pest control methods are also pretty quick and simple to use

Disadvantages

- Almost all chemical pesticides are highly toxic and can cause serious issues if ingested by things that aren't pests, such as household pets and even people
- Frequent and heavy use of chemical pesticides can contaminate groundwater or leave residue on plants which can lead to health issues
- It is possible for pests to develop resistance to chemical pesticides, which can cause major issues when it comes to trying to control this new resistant species

II. Biological

The last of the 3 methods of pest control is biological methods which is one of the oldest forms of pest management. This consists of using other natural organisms to reduce or remove a species of pest, which usually involves introducing their natural predator to the same environment to manage the pest population. It's not commonly used as a method of dealing with pests in a health and safety context, but may be used to control larger populations of pests which could pose a risk to those who live in the same area. Natural predators are one form of biological pest control method, but another that tends to be used on plants is the introduction of microorganisms that protect their host species by deterring any pests.

Advantages

- Biological pest control is generally the most environmentally-friendly method you can use, as it doesn't involve any kind of synthetic substance or the killing or removal of a species by humans
- It's also a long-term solution which means that pest control is usually only needed once
- Introducing a natural predator as a way of controlling pests also doesn't require much cost or effort after the initial introduction, so it's a method that essentially looks after itself

Disadvantages

- Biological pest control is not a particularly reliable method because you cannot dictate how a predatory species is going to act when introduced into a new area
- It's not a very fast process so isn't suitable for instances where a pest infestation needs to be quickly dealt with, nor does it totally wipe out a pest population

- In some cases, introducing a new species into an environment can disrupt the natural balance and established food chain and lead to another infestation of the predatory creature, which will then need to be reduced.

4.5 Consultative arrangements for pest management

Some commonly found pests in hotels and ways of controlling them are discussed as follows:

Bed Bugs: These are tiny parasitic creatures reddish brown in color that feed on the blood of humans and other animals. They are more of a nuisance than a danger, although they can cause severe irritation in some people leading to loss of sleep and lack of energy, particularly in children. They either crawl or are passively transported in clothing or on luggage. By day, they hide in the crevices of beds, furniture, upholstery, wallpaper, and skirting boards, emerging when hungry, usually every few days, to feed. Bed bugs feed at night, sucking blood from exposed surfaces of the skin. They deposit their eggs in cracks of wood and behind wallpaper etc. They stick to the surface and are difficult to brush off. Bugs give off a very unpleasant smell and their bite causes considerable irritation.

Control walls and cracks should be examined every fifteen days.

Points and sockets should be well brushed as they are good breeding spots for bugs.

Racks and wall picture frames should be cleaned regularly.

Mattresses, bed frames, books and wall papers should be sprayed with suitable insecticide frequently. eradication: Fumigation with methyl Bromide or any toxic gas is effective. Liquid insecticides available in the market can also be used.

Beetles: Many types of beetles are involved in causing damage to materials. These include biscuit beetles, carpet beetles, and wood-boring beetles.

Biscuit Beetles: These are brown with a dense layer of yellow hairs on their body, and adults are 2-3 1/2 mm long. They are not dangerous, but they can be a nuisance when they infest a food cupboard. They are pests that attack cereal products and have even been known to infest poisonous substances such as strychnine.

Carpet Beetles: The adult carpet beetle is 2-4 mm long, with a highly convex body. Its colour is variable, often brown or black and mottled with yellow or white scales on its back. These scales sometimes get rubbed off and the beetles then appear dull black in colour. It has grayish yellow scales on its abdomen and prominent antennae. It attacks furs, carpets, and all kinds of woolen textiles. Carpet beetles are pests of animal, and occasionally, plant products. They have emerged

as a major pest to hotel textiles, thriving in the uniform temperatures that result from central heating. Carpet beetles flourish in situations where they can remain undisturbed – for example, beneath carpets, around skirting boards, and in wardrobes.

4.5 Inspecting and maintaining facilities

Partnering with a licensed pest control company is integral to the long-term success of any food processing facility. To ensure a successful partnership, regular inspections by a licensed pest control company are key. In order for these inspections to be beneficial, however, facility managers need to be prepared and familiar with the areas to be inspected. On the day of the inspection, your pest control partner will pay close attention to the following areas of your facility that are most attractive to pests as they provide food, water or shelter.

A. Food Processing Machinery.

Food products and excess moisture build-up around equipment is attractive to a variety of pests, including rodents and cockroaches. Your pest control partner will inspect all machinery to ensure these areas are easy to clean and sanitized regularly to prevent food and moisture build-up that could attract pests.

B . Storage Areas.

Product storage areas are ideal for pests as dark corners and clutter provide ample hiding places. During the inspection, your pest control partner will look for any signs of damage to boxes and bags as rodents are known to chew through cardboard boxes in search of food and nesting materials. They will also look to ensure that products are sealed and stored properly to minimize the risk of any future infestations.

C. Employee Break rooms and Bathrooms.

Crumbs, spills or food left out in employee break rooms and excess moisture in bathrooms are an open invitation for pests. Your pest control partner will inspect these areas to ensure there is no trash build-up and that all plumbing fixtures are working properly.

D. Garbage Disposal Areas.: Garbage cans and dumpsters are ideal for pests as they provide food and nesting materials. During inspection, your partner will ensure all dumpsters have a closable lid, are not located near entry points and are emptied frequently.

Regular inspection is a crucial component of any successful integrated pest management (IPM) plan, which your pest control partner will implement according to your facility's location and nuanced needs. By utilizing this process, which consists of routine inspection, identification and treatment, your pest control partner can easily identify problem areas within the facility and apply the appropriate treatments to ensure pests do not enter.

Additional Steps.

In addition to working with a licensed pest control company, facility managers should take the following measures:

- Ensure employee kitchens and break rooms are clean by wiping down counter tops and sweeping floors to remove crumbs and residue from spills.
- Vacuum and clean all areas regularly, including offices, hallways, lobbies and public bathrooms.
- Routinely check under sinks and machinery for areas of moisture and repair any leaky pipes or clogged drains.
- Store all food products in sealed containers and organize empty boxes to prevent harborage areas.
- Keep trash in sealed containers inside the building and remove them from the facility regularly. Ensure dumpsters are far away from any building entry points.
- Inspect the exterior of the building to ensure there are no entry points, paying close attention to areas where pipes and utilities enter the building, and seal any gaps or cracks in the foundation.
- Install door sweeps on exterior doors to seal the gap between the floor and the door where pests can enter.
- Remove debris from gutters and direct water away from the building through properly functioning downspouts, gutters and splash blocks.
- Install a gravel perimeter around the building to help discourage vegetation growth around the foundation that could harbor pests.
- Ensure the grounds surrounding the facility are properly maintained, as overgrown vegetation can attract pests to the property.

Self-Check -1

Written Test

PART -1

Directions: Say true or false

1. Insect-like organisms, such as mites, ticks, and spiders
2. Pest is not organism

PART-2

Directions : Choose the best answer

1. One of the following is not pest control method
A , Mechanical B .Physical C. Manual D. None
2. Which one of the is the Advantages biological method of pets?
A. Natural predator as a way of controlling pests
B. Biological pest control is not a particularly reliable method because you cannot dictate how a predatory species is going to act when introduced into a new area
C.A&C
E,none

PART-3

Directions: write the correct answer

1. What do you mean by pest control?
2. What are types of pest?
3. Write the method of pest control

Unit Five: Complete Cleaning Procedure

This unit to provide you the necessary information regarding the following content coverage and topics:

- Complete cleaning equipment
- Disposing wastes
- Shifting movable furniture and fittings for hidden dusts
- Storing cleaning agents and supplies
- Checking orderliness/tidiness

Checking orderliness/tidiness This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Understand complete cleaning equipment
- Perform disposing wastes
- Identify shifting movable furniture and fittings for hidden dusts
- Perform storing cleaning agents and supplies
- Checking orderliness/tidiness

5.1 Complete cleaning equipment

Cleaning equipments are essential tool for housekeeping professionals. They help improve productivity and efficiency. Efficient cleaning and maintenance are dependent upon high-quality cleaning equipment, correctly used. Though only 5-10 % of the overall cost incurred cleaning is accounted for cleaning equipment and agent, selecting the ideal equipment play a major role. The department is responsible for the maintenance of all equipment in their custody. For equipment acquired under grants and contracts, the principal investigator shares the responsibility with the department chair or dean. Housekeeper should be aware of any specific equipment care and maintenance requirements defined by their grants or contracts. It is the equipment custodian's responsibility to care for equipment entrusted to his or her possession or supervision, and to keep it safe.

Care of cleaning equipment:-

- To be stored under lock & key
- Issued items to be listed down while issuing & counter sign to be taken
- A note should be made of the area where a machine will be used.
- Post use , the equipment needs to be checked for its condition.
- Proper cleaning is must.
- Electrical equipments should be kept at dry place
- Brooms, mops to be clean well.
- Dusters to be washed after regular use.

5.2 Disposing wastes

Waste management is the process of treating solid wastes and offers variety of solutions for recycling items that don't belong to trash. It is about how garbage can be used as a valuable resource

Hotels are chief consumers of resources, and they immensely contribute to the generation of waste. In the era of Green Economy and green strategies recycling would benefit not only the environment but also the industry. It is essential for a hotel industry to have an effective waste management system which focuses on reducing waste, reusing useful materials and recycling them. Commercial processes tend to generate a lot of waste and require regular maintenance and expensive waste disposal.

5.2.1 Importance of Waste Management in Hotels

Waste management in hotels is important as it is getting increasingly difficult to dispose of waste. Moreover, it makes good sense to the business. When supplies are judiciously used it saves a lot of money on raw materials. You can generate additional income by selling old resources and by reusing and recycling useful materials. Therefore, you end up decreasing the cost of waste disposal as the amount of waste produced is decreased.

It can start with:

- Using refillable dispensers for soaps, shampoos, and conditioners
- Using washable cloth products and dishware instead of disposable ones
- Using water filters instead of plastic bottles
- Reducing and reusing supplies packaging materials
- Reducing the number of paper products
- Switching to LED lights

4 Steps of Effective Waste Management in Hotels

1. Characterization and Quantification of Waste in the Hotel Industry – It is important to categorize the types and quantity of waste produced by every department of the hotel industry so that it is managed properly. For example, office waste (like papers, documents, brochures), household waste (jars, bottles, cardboard), organic waste (vegetable and fruit peels, flowers) can be segregated in color-coded bins for easy and hassle-free waste management.

2. Understand Waste Hierarchy – This concept was presented by Waste on Line (2006) provides options to manage waste by prevention, minimization, reuse, recycle, recovery and disposal which prevents a lot of waste from going to the waste stream. Recovery is the most important part of the process because some value of the material is retrieved through recycling. The last step is disposal which generally involves landfill and incineration of waste.

3. Data Analysis – Hotel industry generates a lot of waste and most of the time it is sent to the landfills without being treated properly. The first step in managing the data analysis of waste is

to perform waste audit. Waste auditing is identifying the process of productivity from waste management practices in hotels. With the help of trash compactors or industrial balers wastes can the volume of waste can be immensely reduced which makes it easier to handle and cost of waste disposal is reduced. Right from hospitals to hotel chains compactors of different sizes, shapes and convenience will prove to be perfect as a waste disposal tool. The organic waste in the hotel can be reduced with the help of a food composter. Composting is a biological process which needs certain temperature moisture, ventilation and carbon and nitrogen ratio. Compost is a very useful soil conditioner and fertile manure.

4. Model and framework development – A framework is developed with special focus on which can save cost on local vendors and labour cost for handling waste. It is classified into two:

- **Profitability from Recyclable and Compostable Waste** – This is the method of generating profit from the business events in a firm. The tool to increase the total profit by any methodical plan.
- **Sustainability from Waste Management** – Everything you need to survive is sustainability. When the social, economic and environmental aspects are taken care of and has all the required conditions to sustain from managing waste, any framework can survive if these three aspects are within.

Managing waste in hotels is one of the major issues and ends up not being properly treated. It is mandatory for hotel industries to develop a complete framework which helps in optimizing each waste material in the industry and also reduce environmental impact.

Hotels produce tones of waste every day due to having a range of facilities, cleaning and replacing almost everything for new guests. A suitable and sufficient hotel waste management plan is essential to save your business time, money, and resources – and it helps protect the environment.

Hotel waste management can be safe, simple, and a great way to sell your business to future customers. From a countryside B&B to an inner-city hostel or boutique hotel, with the right environmental waste management system in place you can reuse, reduce, and recycle as much of your hotel waste as possible.

5.3. Shifting movable furniture and fittings for hidden dusts

Cleaning storerooms and cupboards Storerooms and cupboards need to be cleaned regularly, particularly if food is stored in them. The floor should be swept and washed at least weekly. Shelves should be dusted, cleaned and sanitized weekly and also whenever something has been spilled on them. When you are cleaning storerooms and cupboards that contain food:

- check for anything that has spilled, broken, or come out of its packet
- Check that nothing has been affected by mice, rats, cockroaches or other insects.

Look out for things such as:

- mouse droppings
- bags that have been chewed
- grubs or moths in containers, or moths flying around
- Spider webs.

5.4 Storing cleaning agents and supplies

Handling your cleaning chemicals safely and ensuring that standards are upheld is probably the most important aspect of proper cleaning chemical storage. All containers should be properly sealed and kept in either their original container or an appropriate container for their hazard class. Different chemicals should never be mixed, even if they are similar “types” of chemicals. Portable cleaning product containers should be returned to their designated place when not in use. In addition, the dates of all products should be known, and old, unused products should be safely disposed. Consider disposing of any open product that has not been used for one year and any sealed product that has not been used for two years.

Proper documentation, training, location, organization, handling, and maintenance of your cleaning chemical storage protocol will eliminate risks and ensure safety in your operations.

Following a strict chemical safety program is one of the most important steps to ensure the proper handling and storage of cleaning chemicals. Here’s a few things your chemical safety program should include:

- A complete list of all cleaning chemicals used in the facility.

- Documentation on the potential hazards associated with each chemical, as well as a **Safety Data Sheet (SDS)** for each cleaning product.
- Clearly-labeled cleaning products.
- Properly trained employees with access to training resources as needed.
- Safety signage conveniently placed around your facility

For proper Maintaining and storing cleaning equipment and chemicals

1. The store should be dry and well ventilated as dampness causes rust of metal parts or mildew leading to deterioration of equipments.
2. The store should provide enough space for easy access to shelves and to facilitate proper cleaning.
3. There should be adequate racks and cupboards properly labeled for easy identification.
4. Stock records should be maintained showing:
 - Date of purchase
 - Kind of stock and quantity
 - Name of supplier
 - Cost per unit
 - Date of issue into service
 - Remarks on suitability and durability
5. Certain rules must be maintained for the issue of stocks:
 - A definite time should be specified for issue
 - Issue should be done strictly against worn out equipment.
 - Equipment should be clearly marked as to the floor or public area.
6. Storage rooms should be subject to regular inspection.
7. Expensive equipments like vacuum cleaners should be covered with polythene sheets and kept air-tight.

Equipment faults may include:

- breakdowns
- damage to parts, surfaces, electrical cords and connections

5.5. Checking orderliness/tidiness

5.5.1. Check equipment is clean, ready and safe

What do I need to check? Items must be appropriate for task Make sure all necessary attachments for equipment are taken with you Used strictly in accordance with manufacturer's instructions Ensure electrical cord is safe to use Ensure battery-operated equipment is fully charged Class Activity – Discussion & Demonstration What else would you check? Items must be appropriate for task – many instances of damage or injury have resulted from trying to complete a cleaning job without the right tools Make sure all necessary attachments for vacuum cleaners, polishers and other equipment are taken with you before leaving the cleaning store to enable you to complete the intended task. This saves time and effort All electrically-powered and battery-powered items must be used strictly in accordance with manufacturer's instructions. If you don't know how to use an item either read the instructions or ask an experienced staff member to show you what to do A standard check with any piece of electrical equipment is to ensure the electrical cord is safe to use – not frayed or broken and with no wires exposed Make sure any battery-operated equipment is adequately charged before using it. Low battery power can adversely affect cleaning performance and causes time loss when the job has to be interrupted to remedy

Self-Check -1	Written Test
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Part-1

Directions: Write true or false

Q1. Reducing and reusing supplies packaging materials is important of disposing waste

Q2 Handling you're cleaning chemicals safely and ensuring that standards are upheld is probably the most important aspect of proper cleaning chemical storage.

Part-2

Directions: write the correct answer

Q1. Care of cleaning equipment?

Q2. Model and framework development?

Q3. **Steps** of Effective Waste Management in Hotels?

Directions: Write true or false

Q1. Reducing and reusing supplies packaging materials is important of disposing waste

Q2 Handling you're cleaning chemicals safely and ensuring that standards are upheld is probably the most important aspect of proper cleaning chemical storage.

Directions: Choose the best answer

PART -3

Q1. Certain rules must be maintained for the issue of stocks?:

A. definite time should be specified for issue

B .Issue should be done strictly against worn out equipment.

C.Equipment should be clearly marked as to the floor or public area

D.All

Reference

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