BASIC FOOD SAFETY TRAINING MANUAL
CATERING
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Welcome to the manual –

The manual is designed for eating house, canteens and other catering businesses registered with FSSAI.

This manual explains General Requirements on Hygienic and Sanitary Practices to be followed by all Registered Food Business Operators engaged in catering/food service establishments, as per Food Safety & Standard Act, 2006.

This manual presents bare minimum requirements of Food Safety and hygiene to be followed by Food Business Operators along with Industry best practices.

Learning Outcome –

The objective of this manual is to train the personal that can be designated as Food Safety Supervisors in the Catering Establishment, about food safety and hygiene requirements which are to be followed in their businesses. The Food Safety Supervisors (FSS) may interpret these requirements according to the size and type of their establishment.

The desired outcome of this manual is better understanding of food safety and hygiene requirements and high standards of food safety in the catering industry.

What the law says –

In India, the mandatory sanitary & hygiene requirements for catering industry are –

PART I

INTRODUCTION TO FOOD SAFETY

Food safety & food safety hazards
Food spoilage
FOOD SAFETY & FOOD SAFETY HAZARDS

**Food Safety** means assurance that food is acceptable for human consumption according to its intended use.

**Food Borne Diseases** are the diseases caused due to consumption of a contaminated or spoilt food. Food borne disease is a serious problem that affects every country in the world. It can cause vomiting, diarrhea and fever, and in some cases it can be deadly.

Food borne disease can affect anyone, but some people are more at risk. For example, young children, the elderly, pregnant women and people who are unwell.

**Food Safety Hazards** means biological, chemical or physical agent in food, or condition of food, with the potential to cause an adverse health effect. There are majorly four types of hazards

**There are three main types of food safety hazards**

1. **Microbiological** (e.g. bacteria, fungi etc.)
2. **Chemical** (e.g. cleaning chemicals, pesticides, etc.)
3. **Physical** (e.g. broken glass, hair, etc.)

In catering and food service microbiological hazards are the most important.

It is essential for all food handlers be cautious and prepares food safely to prevent consumers from food borne illnesses.

Bacteria are very small organisms that cannot be seen without a microscope. Some types of bacteria are harmful to people and can cause food borne disease.
Bacteria can get into the food handling areas through various modes. These are soil, human contact, waste, contaminated water, pest, raw food items such as raw meat, eggs, and raw vegetables, etc.
FOOD SPOILAGE

Food spoilage means that the original nutritional value, texture, flavour of the food are damaged, the food become harmful to people and unsuitable to eat.

Major reasons for food spoilage are -

Activity 1

1. It is essential for all food handlers be cautious and prepares food safely to prevent consumers from food borne illnesses. True/False
2. Three types of hazards are
   a. __________________ b. __________________ c. __________________
3. __________________ are the main cause of food spoilage.
   a. Bacteria   b. Stones   c. Hair
4. Food borne _______ results when a person consumes food contaminated by pathogens.
5. Food Safety is assurance that food is acceptable for human consumption according to its intended use. True/False
PART II

LOCATION, LAYOUT & FACILITIES

Location & surroundings
Layout & design of food establishment premises
Equipment & containers
Facilities
LOCATION & SURROUNDINGS

- Location of a catering establishment should be away from filthy surrounding in a sanitary place and shall maintain over all hygienic environment.
- All new units shall be set up away from environmentally polluted area.
- Potential sources of contamination like rubbish, waste water, toilet facilities, open drains an stray animals shall be avoided.
LAYOUT & DESIGN OF FOOD ESTABLISHMENT PREMISES

1. **The designing of premises** shall be such that there should be no cross contamination in food preparation area occur from pre and post manufacturing operations. The material movement should be done in one direction only (no backward flow), to prevent cross contamination.

2. **Floors, ceilings and walls** of the catering establishment must be made of impervious material. They should be smooth and easy to clean with no flaking paint or plaster and maintained in a sound condition to minimize accumulation of dirt, condensation & growth of moulds.
3. The doors in the catering establishment shall be made of smooth and non-absorbent surfaces and they shall be easy to clean and disinfectant.

4. Windows, doors & all other openings to outside environment should be well screened with wire-mesh or insect-proof screen to protect the premise from pests.

5. There should be efficient drainage system and there shall be adequate provisions for disposal of refuse.
6. The surfaces of the Vending/ carts, tables, awning, benches and boxes, glass cases, etc. shall be clean, hygienic, impermeable and easy to clean (like stainless steel), and placed at least 60 to 70 cm. from above ground.

7. The vending surface which comes in contact with food or food storage utensils shall be built of solid, rust/corrosion resistant materials and kept in clean and good condition. They shall be protected from sun, wind and dust.

8. When not in use, food vending surface shall be kept in clean place and properly protected.
EQUIPMENT & CONTAINERS

1. The design of equipment, containers and Machinery
- Do not use utensil made up of cadmium lead, non-food grade plastic and other toxic materials for cooking and storage.
- Should permit easy cleaning to avoid accumulation of food particles and or microbes.
- Should be made from stainless steel. Copper and brass utensils must have a proper lining.
- All equipment and containers shall be kept clean, washed, dried and stacked at the close of business to ensure freedom from growth of mould/ fungi and infestation.
- Containers used for storage should be closed with a lid.
- All equipment shall be placed well away from the walls to allow proper inspection.
- Store non-food items such as chemicals, etc. away for the food storage containers
ACTIVITY - 2

1. Brass utensils, when used shall be provided with lining. True/False

2. Windows, doors & all other openings shall be well screened with wire-mesh to protect the premise from ............
   a. personals  b. sunshine
c. pest       d. wind

3. What are the requirements of ideal location?
   a. ...........................................
   b. ...........................................
   c. ...........................................
   d. ...........................................

4. Material movement is allowed in ............ Direction.
   a. One       b. bi
c. Uni       d. Multi

5. Equipment and containers for waste, by-products, cleaning chemicals and inedible or dangerous substances, shall be same. True/False
FACILITIES

The facilities required for producing and serving safe and hygienic food include, water supply, utensils and equipment cleaning facilities, raw material washing facilities, potable ice and steam facilities, personnel facilities & toilets, proper ventilation, air quality & lighting systems. The requirements are detailed as follows –

1. Continuous supply of **potable water** shall be ensured in the premises. Water filters may be installed to ensure clean water supply.
2. In case of intermittent water supply, adequate storage arrangement for water used in food or washing shall be made.

3. **Transporting of drinking water** (treated water like bottled water, boiled/filtered water through water purifier etc.) shall be in properly covered and protected containers and it shall be stored in clean and covered containers in a protected area away from dust and filth.
4. **For Cleaning Utensils / Equipment** adequate facilities for cleaning, disinfecting shall be provided with hot and cold water facility, if required.

5. **For washing of raw materials**, there should be a separate sink for washing raw materials. The raw materials must be washed before storing.
Low and High Risk Cleaning

High Risk
- Wash
- Disinfect
- Dry

Low Risk
- Wash
- Dry

Some items and areas are ‘high risk’ because they come into direct contact with food or hands. They need to be disinfected to kill bacteria, whereas ‘low risk’ items and areas do not.
A cleaning product called a ‘disinfectant’ can kill bacteria if it is used correctly. The cleaning process must include washing (to remove grease), disinfection (to kill bacteria) and drying.
Other Disinfection Methods

Heat kills bacteria, so if a cleaning method uses very hot water (e.g. a dishwashing machine) the bacteria will all be killed. This is another method of ‘disinfection.’
6. **Ice and Steam** for use in production of food shall be made of potable water. They should be handled hygienically to avoid cross contamination. The ice shall be handled using food grade plastic scoop and the ice machine shall be kept clean at all times.

4. **Personnel facilities and toilets** are of major importance as the personnel are constantly in touch with the food. Proper hand washing facilities shall be provided. The requirements of a Hand washing and drying system include –

- Germicidal liquid Soap
- Sanitizer
- Supply of hot and/or cold water
- Wet hands drying system
- Clean and dry towels, preferably paper towel/rolls
- Covered Trash Bin, preferably pedal operated with plastic lining

Also, separate adequate hygienic lavatories and changing facilities shall be provided for the personnel. The restroom and refreshments rooms shall be separate from food process and service areas to avoid personnel from having their food in restroom.
5. **Air quality and ventilation system** shall be designed and constructed so that air does not flow from contaminated areas to clean areas.

6. **Lighting** should be sufficient to the food establishment area. Lighting fixtures should be covered to prevent breakages of electrical fittings to contaminate food.

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**Activity 3**

1. Only ___________ water is used for food preparation.
   a. Potable       b. Non-potable

2. We should wash, ____________, dry chopping boards, knives etc.
   a. Steam         b. Disinfect    c. Clean

3. It's is preferable to use paper towels to clean knife and chopping boards. True/ False.

4. We should use hot water for dishwashing. True/ False.

5. Ice should be made from normal unfiltered tap water. True/False.
PART III

Food Production

Receiving
Storage
Pre-Preparation
Cross Contamination
Cooking
Reheating
Chilling
Distribution & Serving
Waste Disposal
RECEIVING

Procurement of raw materials –

- Ensure the receiving area is clean.
- Check for FSSAI License number on the products
- Check the temperature of delivered food—they must be same temperature as your storage temperature
- Use only grade A eggs, pasteurised milk products and meat from inspected source
- Do not buy/use cans that are dents and packages for leaks and tears.
- Check expiry/best before dates.
- Look for signs that frozen food has thawed and been refrozen
- Check produce for signs of spoilage, insect & dirt
- Check meat products for freshness (bright colour, no odour)
- Buy raw produce as per requirement and storage capacity to avoid food spoilage and waste.

Always check for FSSAI License no., Manufacturing Date and Best Before Date On Products

Checking Labelling requirements before receiving
### Fish
- Odor shall not be stale.
- Body should not have wound or injury marks. The skin of fish should not break when pressed.
- Ventral portion shall be clean. Eyes must be crystalline and not smudged or slimy.
- Gill should be fresh when inspected preferably pink in colour.

### Chicken
- Mostly preferred at 700 gms to 1100 gms of weight.
- Body should not have wound or injury marks. Should not have excess slime formation or surface.
- The bird should not smell of any medicine. When we squeeze the animal water should not come out.

### Meat
- Identification of Gender
- Should be Pinkish Rose in colour. No-Green patches in body.
- Colour should not have turned black. It should be brown or pinlish brown.

### Special Focus before receiving
- Accept fish and marine products at below 5°C.
- Clean and intact.
- Accept poultry products at/below 5°C.

### Special Focus before receiving
- Do not accept fish and marine products at above 5°C.
- Do not receive broken & rotten eggs.
- Do not accept poultry products above 5°C.
Receive products in clean crates

Clean and sanitized trolleys for receiving raw material

Accept fresh produce with no sign of spoilage

Do not receive products in polythene

Unclean trolleys

Reject spoiled fresh produce
Accept meat products at/below 5°C

Do not accept meat products above 5°C

Accept dairy products at/below 5°C

Do not accept dairy products above 5°C

Receiving of potentially hazardous food such as cooked meat at or above 65°C

Receiving of potentially hazardous food such as cooked meat below 65°C

Accept packed product in intact and good condition

Reject packed product if they are torn or damped
ACTIVITY - 6

1. Receiving temperature of frozen food should be 0°C or below. True/False

2. Receiving temperature of potentially high risk food should be at or below ......
   a. 10°C
   b. 5°C
   c. 7°C
   d. 15°C

3. Raw material or ingredient thereof shall be accepted if it is known to have -
   a. Good sanitary conditions
   b. Foreign Object
   c. Parasite
   d. Pesticide

4. Every manufacturer, distributor or dealer selling an article of food to a vendor shall give either separately or in the bill, cash memo or label a warranty in ............... 
   a. Form E
   b. Form D
   c. Form B
   d. Form A

5. Packaged raw material must be checked for 'expiry date'/ 'best before'/ 'use by' date, packaging integrity and storage conditions. True/False
After receiving and accepting the raw material, there comes the need of storage. The storage facilities shall be designed and constructed to avoid cross-contamination during storage, permit adequate maintenance and cleaning and shall avoid pest access and accumulation. Cold Storage facility shall be provided for food that requires being stored below 5°C.

While procuring and receiving the raw material, the food handler shall ensure that:

- Frozen food must be stored at -18°C (0°F)
- Refrigerators & Refrigerated display units must be 4°C (40°F) or colder
- Dry storage areas should be from 10°C to 21°C (50°F to 70°F)
- Store raw and ready to eat/cooked food separately
- Never store raw food above ready to eat/cooked food.
- Keep food covered all the time
- Keep all foods labelled
- Rotate stock (FIFO- First in First Out and FEFO- First Expire First Out)
- Store all food 15cm (6 inches) off the floor to facilitate cleaning and deter pest.
- Keep packaging material covered to avoid contamination.

Store area should be ventilated and well-lit. All items are sorted and kept at their designated place. The flour is kept 15 cm above the ground.
Vegetarian and Non Vegetarian food are packed in clean packs/containers and stored in the segregated area.

Separate Fridge is required for veg and non-veg food.
If separate refrigerator is available: -
  - Sequence in Veg Refrigerator – Ready to eat and salad at the top shelf, cooked vegetables at next top shelves and raw vegetables at the lower shelves.
  - Sequence in Non Veg Refrigerator – Ready to eat and non-veg salad at the top shelf, cooked Non-Veg at next top shelves and raw Non-veg at the lower shelves.

If separate refrigerator is not available:-
Ready to eat and salad at the top shelf, cooked vegetables at next top shelves, Cooked Non-Veg in the next top shelves and raw food at the lower shelves
<table>
<thead>
<tr>
<th>Sequence of veg refrigerator</th>
<th>Sequence of non-veg refrigerator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Top shelf</strong></td>
<td><strong>Top shelf</strong></td>
</tr>
<tr>
<td>Ready to eat &amp; veg salad</td>
<td>Ready to eat &amp; non veg salad</td>
</tr>
<tr>
<td><strong>Medium Shelf</strong></td>
<td><strong>Medium Shelf</strong></td>
</tr>
<tr>
<td>Cooked vegetable</td>
<td>Cooked non-veg</td>
</tr>
<tr>
<td><strong>Bottom Shelf</strong></td>
<td><strong>Bottom Shelf</strong></td>
</tr>
<tr>
<td>Raw vegetable</td>
<td>Raw non-veg</td>
</tr>
</tbody>
</table>

**Activity 4**

1. We should check for FSSAI License No. on packaged food products. True/False.
2. FIFO is First In ____________________.
3. Raw food should be stored above cooked food. True/False.
4. We should only use food grade plastic for storing food products. True/False.
5. Food containers should be kept ______ cm above floor.
   a. 15 cm          b. 20 cm
Pre-Preparation

1. Wash all raw vegetables and fruits thoroughly in potable water.
2. All the equipment being used such as chopping boards, knives, peelers, processors etc. should be thoroughly clean.
3. Raw/cooked food should be handled separate and separate equipment should be used.
4. Vegetarian and non-vegetarian food should be handled separate and separate equipment should be used.

Thawing of Food

Thawing is a process of defrosting the frozen food. Thawing frozen food correctly is important for keeping food safe to eat. Thawed material should be consumed (Intend is processing) immediately. Do not store back thawed material for future use and only required portion of the food should be thawed at a time. The two most methods for thawing food -

Thawing-In Refrigerator
Place the frozen food in the perforated pan so that dripping should not contaminate the food. Place the perforated pan in a tray/pan so that food dripping accumulates in the tray/pan and it cannot drip on other food.

Thawing in Microwave Oven
Only small portion of food should thaw by this method. A product is deemed to be thawed when core temperature lies between 1⁰ C to 5⁰ C. Use thawed product immediately.
CROSS-CONTAMINATION

Cross contamination is one of the most common causes of food poisoning. It happens when harmful germs are spread onto food from other food, surfaces, hands or equipment.

Cross contamination may occur from –

1. Food to food

2. Hand to food

Do not handle veg and non veg products together.

Do not touch cooked food with hands
3. **Equipment to food**

![Do not use same equipment for veg and non-veg food](image)

**Following should be done to avoid cross – contamination -**

- Raw food/ meat/poultry and ready-to-eat foods should be kept separate at all times.
- Hands should be thoroughly washed before switching from preparing non vegetarian products to any other activity.
- Work surfaces, chopping boards and equipment should be thoroughly cleaned (intend clean and sanitize) before the preparing of food starts and after it has been used.
- Separate chopping boards and knives for raw fruit/ vegetables/ meat/poultry and ready-to-eat food should be used.
- Raw meat/poultry below ready-to-eat food should be kept in the fridge.
- Separate fridge for raw meat/poultry should be kept.
- Staff should be made aware how to avoid cross-contamination.
Bacteria can easily spread from raw food (e.g. raw meat) onto hands, knives, chopping boards, equipment (e.g. fridges).

Hand, equipment and utensils must be thoroughly cleaned in between task.

Raw meat must be kept separate from ready to eat food products

Ready to Eat

Raw Food

Raw meat must be kept separate from ready to eat food products

Raw meat can spread bacteria to ready-to-eat food (e.g. salad) unless it is kept separate at all times. Bacteria can be spread by contact with hands, utensils or equipment.

Colour coded chopping boards and knives

Prevent cross contamination
Use the correct colour coded chopping boards and knives

- Raw meats and poultry only
- Raw fish and shellfish only
- Raw unwashed vegetables, salads and fruits only
- Ready to eat and cooked foods only
- Washed vegetables, salads and fruits only
- Bakery and dairy products only

Colour coded chopping boards may be used. A template of colour code for chopping boards and knives
Separate storage of raw vegetables and non veg products

**ACTIVITY- 5**

1. Handling foods after using the toilet without first properly washing hands, may lead to ........................................
   a. pasteurization  
   b. sanitation  
   c. cross-contamination  
   d. incubation

2. Cross contamination may occur from -
   a. Food to food  
   b. Utensils to food  
   c. Food handler to food  
   d. Customer to food

3. Raw meat and raw vegetables may be stored together. True/False

4. As a good hygiene practise, separate chopping board shall be used for handling raw vegetable and raw meat. True/False

5. Hands should be thoroughly washed before switching from preparing non vegetarian products to any other activity. True/False
COOKING

Since harmful contaminants can't be seen, smelled or tasted, it's important that you cook your food to a safe internal cooking temperature to avoid food poisoning. The cooking process should be adequate to eliminate and reduce hazards to an acceptable level.

- The cooking must be done to reach a minimum internal temperature of 75°C.
- The cooking of veg. & non-veg. products should be segregated to avoid contamination.
- Fresh vegetable juices salads, etc should be extracted at the time of order and not in advance. In case storing is require, refrigerate at 5°C or below in clean container.
Cooking Liquid-based Dishes

Heat kills bacteria. If food reaches a high enough temperature during cooking the bacteria will be killed. If a liquid item is boiling throughout then it has reached a safe cooking temperature.
When cooking meat, there are colour changes to show that safe temperatures have been reached. White meat (e.g. chicken) must have changed from pink to white all the way through.
Red meat that has been chopped or minced (e.g. kebab meat, burgers) must have changed from red to brown all the way through.
When cooking mixed food items (e.g. biryani), it must be steaming hot throughout to show that a safe temperature has been reached.
REHEATING OF FOOD

- When re-heating, food must get hot enough to kill bacteria.
- It must be bubbling / steaming throughout to show that a safe temperature has been reached.
- Reheated food can be held at 60°C or more and discard any food that is reheated and being unused.

CHILLING

Microorganisms grow well in the temperature danger zone, i.e. 60°C to 5°C. Within this range, temperatures between 51°C to 21°C allow for the most rapid growth of microorganisms. For this reason food must pass through this range quickly.

The best way of chilling is using blast chillers. If special equipment is not available, food should be chilled as quickly as possible using following methods:
HOT & COLD HOLDING OF FOOD

When hot-holding and cold-holding, food must be kept hot to stop bacteria from growing. Hot-holding equipment must be able to keep foods at a temperature of 60°C or higher and cold-holding equipment must be capable of keeping foods at a temperature of 5°C or colder.
Activity 6

1. Food should be cooked above ______ °C to ensure all microbes have been killed.
2. Cold food should be kept below ______ °C
3. Various method of chilling are
   a. ____________  b. ____________
   c. ____________  c. ____________
4. Change in colour of poultry from pink to ________ is an indication of it being cooked properly.
5. Leftovers can be reheated at _________ °C
FOOD PACKAGING

- Food packaging prevents contamination, allows food to be transported easily and extends shelf life. Packaging also provides a surface for labelling and identification of products.
- Use only food grade plastic for packaging of food.
- The packaging material should not be contaminated from physical hazard (such as dirt, hair etc), chemical hazard (such as process ink, adhesive etc.) & biological hazard (such as bacterial or fungal contamination).
- The food packaging material shall conform to all the Regulations and standards laid down under the Food Safety & Standard Act, 2006.

![Food Packaging Materials](image1)

FOOD DISTRIBUTION/SERVICE

1. Processed / packaged and / or ready-to-eat food shall be protected as per the required storage conditions during transportation and / or service.
2. Handling of food should be minimal. It should be ensured that utensils, crockery, cutlery and specially hands of the food handlers/seller are clean and sanitized.
Keep pots & pans covered for hot foods
Stir hot and cold foods service to maintain temperatures

For hot foods, heat service containers in oven
Chill service containers in refrigerator

Hygienic serving Techniques
WASTE DISPOSAL

- Waste storage shall be kept in covered containers.
- It shall be removed at regular intervals as per local rules and regulations.
- It shall be emptied and washed daily with a disinfectant and dried before next use.
- Waste disposal area shall be located away from food processing area to avoid contamination.
PART VII
PERSONAL HYGIENE
Personal cleanliness of food handlers is the most important link in preventing foodborne illness. These personal hygiene habits shall become a part of their behaviour.

1. All food handlers shall wear suitable clean protective clothing, head covering, face mask, gloves and footwear.

2. Food handlers shall always wash their hands with soap and clean potable water, disinfect their hands and then dry with hand drier or clean cloth towel or disposable paper.

3. Food handlers shall always wash their hands at the beginning of food handling activities immediately after handling raw food or any contaminated material, tools, equipment or work surface, where this could result in contamination of other food items or after using the toilet.

4. No Food handlers shall be engaged in smoking, spitting, chewing, sneezing or coughing over any food and eating in food preparation and food service areas.

5. The food handlers should trim their nails and hair periodically.

6. Food Handlers shall avoid certain hand habits such as scratching nose, running finger through hair, rubbing eyes, ears and mouth, scratching beard, scratching parts of bodies etc. When unavoidable, hands should be effectively washed before resuming work after such actions.

7. Street shoes inside the food preparation area should not be worn while handling & preparing food.

8. Food handlers should not handle soiled currency notes/cards to avoid cross contamination.
Basic requirements for personal hygiene -

**Do (क्या करें)?**

- Hair should be properly tucked inside the cap
- No earrings or necklace/chains
- No outer pockets
- Wear neat and clean clothes
- No wrist watch/rings
- Cover all wounds
- Nails should be short and clean
- Torn clothes should be repaired or replaced
- Wear clogs and safety shoes

**Don't (क्या न करें)?**

- Hair coming outside the cap
- Earring and necklace/Chains
- Outer pockets and contents
- Dirty clothes
- Wrist watch/Rings
- Open and bleeding wounds
- Long and painted nails
- Torn clothes
- Bare feet/slippers
Here’s procedure for how to properly wash hands and when to wash hands.

**How to wash hands**

1. Wet hands
2. Soap (20 seconds)
3. Scrub backs of hands, wrists, between fingers, under fingernails.
4. Rinse
5. Paper Towel Dry
6. Turn off taps with towel

**How to wash hands**

1. Palm to palm
2. Between fingers
3. Back of hands
4. Base of thumbs
5. Back of fingers
6. Fingernails
7. Wrists
8. Rinse and wipe dry
When to wash your hands

General Hygiene & Health of Food Handlers
General Hygiene & Health of Food Handlers

Food handlers shall avoid certain hand habits such as scratching nose, running finger through hair, rubbing eyes, ears and mouth, scratching beard, scratching parts of bodies etc.

- No jewellery allowed
- Nails should be trim with no nail paint
- Hair should be trim with hair net
- No perfume allowed
- Cuts should be dressed
- No mobile phone allowed
**Visitor Policy:** Visitors should be discouraged to enter the food production area. In case that is not possible, visitors should wear protective clothing and wash and sanitize hands before entering the food premises.

Employees must not work in food preparation areas if they have been suffering from the following symptoms within the last 48 hours:

- Diarrhoea
- Vomiting
- Fever

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**ACTIVITY- 7**

1. Any person suffering from a disease, shall immediately report illness or to the management and does not resume work. True/False

2. Only specific personnel shall be compulsorily inoculated against the enteric group of diseases. True/False

3. Visitors shall adhere to the personal hygiene provisions as mandate for Food handlers. True/False

4. Street shoes are allowed inside the food preparation area while handling & preparing food. True/False

5. All food handlers shall wear suitable clean protective clothing, head covering, face mask, gloves and footwear. True/False
PART VIII

PEST CONTROL
PEST CONTROL

A pest is any living organism that causes damages or discomfort, or transmits or produces diseases.

The Major Pest includes –
1. Cockroaches
2. Rodents (mice, rats, squirrels etc.)
3. Flies
4. Stored product pests (Flour beetle, sawtooth grain beetle, cigarette beetle, indianmeal moth etc.).

Pests carry and spread bacteria. They must be prevented from getting into any food storage or handling area, for example by checking deliveries and removing waste regularly.

Pest Control Measures
- Screen doors and windows to keep flies out
- Fill in all holes, in the premises
- Check deliveries for infestations
- Eliminate water and food sources, fix leaky faucets and do not leave water in sinks or buckets
- Rotate stock, use FIFO
- Keep food covered
- Keep garbage covered
- Get pest control done by professional agencies only.
- Never spray chemicals while food is present in the kitchen

Some of the potential sources of pest entrance

Broken glass of the window

Open exhaust

Gap in between shutter & floor

Space in blinds on exhaust
Some of the pest control methods (4 D’s Approach)

Deny entry

Deny food

Deny shelter

Destruction

Some of the pest control methods

- Rat cage protected by steel frame
- Glueboard for insect trapping in production
- Maintain 1.5m radius gap
- End seal for pipelines not in use
- Insectocutor used outside production area
- Maintain 3m radius gap
- Tamper resistant bait station secured onto ground
- Hook up baits
- Mesh and grit for drainage
Some of the pest control methods

Food materials shall be stored in pest-proof containers stacked above the ground and away from walls.

Activity 8

1. Signs of pest infestation are ____________________.
2. List 2 measures to control pest infestation
   a. ____________________      b. ____________________.
3. We should always get pest control done from a professional and never do it ourselves. True / False.
4. We should never spray insect repellents or any other chemicals while food is kept in the kitchen. True / False.