

3. Inspection Checklist

During every inspection, check the following:

Location

The extinguisher should be installed at its designated location.
It should be clearly visible and easy to reach.

Accessibility

Ensure no furniture, cartons, machinery, or stored materials are blocking access.
Every person should be able to reach the extinguisher quickly during an emergency.

Physical Condition

Inspect the extinguisher for:

- Dents
- Rust
- Corrosion
- Leakage
- Cracks.
- Broken Handle
- Damaged Hose
- Loose Nozzle

Any damaged extinguisher should be reported immediately.

Safety Pin

- The safety pin should be in place.
- The tamper seal should not be broken.

If the seal is broken, the extinguisher may have been used or tampered with.

Pressure Gauge

If the extinguisher has a pressure gauge:

- Green Zone = Ready for use
- Red Zone = Low pressure or over-pressurized

If the needle is outside the green zone, the extinguisher requires servicing.

Inspection Tag

Every extinguisher should have an inspection tag.

The tag should show:

- Date of Inspection
- Inspector's Name
- Next Inspection Due Date

4. Difference Between Inspection, Maintenance & Servicing

Inspection

A routine visual check carried out daily, weekly, or monthly.

Example:

Checking pressure gauge and extinguisher location.

Maintenance

A detailed examination performed by trained personnel.

Maintenance includes:

- Internal inspection
- Cleaning
- Replacement of damaged parts
- Checking discharge mechanism

Usually carried out annually.

Servicing / Recharging

Whenever an extinguisher has been discharged, even partially, it must be recharged by an authorized service provider.

Recharging includes:

- Refilling extinguishing agent
- Pressurizing the cylinder
- Leak testing
- Safety testing

Never attempt to refill an extinguisher yourself.

5. Proper Storage of Fire Extinguishers

Correct storage ensures quick access during emergencies.

Fire extinguishers should be:

- Installed on wall brackets or approved stands.
- Clearly visible.
- Easily accessible.
- Protected from physical damage.
- Installed near exits and escape routes.
- Away from direct sunlight and excessive heat.
- Protected from moisture and corrosive chemicals.

Fire extinguishers should NOT be:

- Locked inside cupboards.
- Hidden behind furniture.
- Covered with boxes.
- Used as door stoppers.
- Stored on the floor without support.

6. Inspection Frequency

Although organizations may have different schedules, a typical inspection program is:

- Daily – Visual observation in high-risk areas.
- Weekly – Basic condition check.
- Monthly – Complete visual inspection.
- Yearly – Maintenance by trained personnel.
- Every 5 years (or as per manufacturer/standard) – Hydrostatic pressure testing, where applicable.

Always follow local regulations and manufacturer recommendations.

7. When Should a Fire Extinguisher Be Replaced or Serviced?

A fire extinguisher should be serviced or replaced if:

- It has been used.
- Pressure is low.
- Safety pin is missing.
- Seal is broken.
- Cylinder is damaged.
- Hose is cracked.
- Nozzle is blocked.
- Inspection date has expired.
- Manufacturer's service life has ended.

Never ignore a damaged extinguisher.

8. Practical Operation of a Fire Extinguisher

Before operating an extinguisher:

- Raise the fire alarm.
- Inform others nearby.
- Ensure someone has called the Fire Department.
- Confirm the fire is small and manageable.
- Keep an exit route behind you.

Then use the PASS technique:

1. **P – Pull**

Remove the safety pin.

2. **A – Aim**

Aim the nozzle at the base of the fire.

3. **S – Squeeze**

Press the operating lever firmly.

4. **S – Sweep**

Move the nozzle slowly from side to side until the fire is extinguished. Continue watching the area for possible re-ignition.

9. Common Mistakes While Using Fire Extinguishers

Avoid these common mistakes:

- Using the wrong extinguisher.
- Standing too close to the fire.
- Standing with no escape route.
- Aiming at the flames instead of the base.
- Forgetting to remove the safety pin.
- Turning your back before ensuring the fire is completely out.
- Fighting a fire that has already spread beyond control.

10. Practical Demonstration

Each trainee should practice:

- Identifying different extinguishers.
- Reading the pressure gauge.
- Checking inspection tags.
- Identifying damaged extinguishers.
- Performing the PASS technique.
- Extinguishing a controlled training fire under instructor supervision.

Practical training builds confidence and prepares learners for real emergencies.

Key Takeaways

- ✓ Fire extinguishers should be inspected regularly.
- ✓ Inspection ensures the extinguisher is always ready for use.
- ✓ Every discharged extinguisher must be recharged.
- ✓ Store extinguishers where they are visible and accessible.
- ✓ Never use a damaged extinguisher.
- ✓ Practical training is essential for safe and effective firefighting.

Safety Tips

- Inspect extinguishers regularly.
- Report damaged equipment immediately.
- Never block access to extinguishers.
- Replace missing safety pins without delay.
- Read the operating instructions before use.
- Only trained personnel should carry out maintenance and servicing.

MODULE 7

FIRE DETECTION & FIRE ALARM SYSTEMS

Learning Objectives

After completing this module, learners will be able to:

- Understand the purpose of fire detection and alarm systems.
- Explain how fire alarms help save lives and property.
- Identify the main components of a fire alarm system.
- Differentiate between conventional and addressable fire alarm systems.
- Understand different types of fire detectors.
- Learn the actions to take when a fire alarm sounds.

1. Introduction to Fire Detection & Alarm Systems

A fire can spread within a few minutes. The earlier a fire is detected, the greater the chance of controlling it before it becomes dangerous.

A **Fire Detection and Alarm System (FDAS)** is designed to detect smoke, heat, or flames and warn people immediately by sounding an alarm.

The main purpose of a fire alarm system is **not to extinguish the fire**, but to **alert occupants so they can evacuate safely and begin emergency response**.

Fire alarm systems are installed in: Offices • Schools • Hospitals • Hotels • Shopping Malls • Factories • Warehouses • Residential Apartments • Airports

2. Why are Fire Alarm Systems Important?

Fire alarms provide **early warning**, allowing people to respond quickly.

They help to:

- Save lives.
- Reduce injuries.
- Minimize property damage.
- Allow faster evacuation.
- Notify emergency response teams.
- Reduce panic during emergencies.

A delay of even a few minutes can make a small fire much more dangerous.

3. Main Components of a Fire Alarm System

Every fire alarm system consists of several important components that work together.

Fire Alarm Control Panel (FACP)

The Fire Alarm Control Panel is known as the “**brain**” of the fire alarm system. It receives signals from detectors and manual call points and activates alarms.

Functions include:

- Monitoring the system
- Displaying fire locations
- Activating sounders
- Monitoring faults
- Controlling emergency devices

Smoke Detectors

Smoke detectors identify smoke particles produced by fire. They usually detect a fire before flames become large.

Commonly installed in:

- Offices
- Corridors
- Hotels
- Hospitals
- Residential buildings

Smoke detectors provide early warning.

Heat Detectors

Heat detectors respond to a rise in temperature instead of smoke. They are installed where smoke detectors may produce false alarms.

Common locations:

- Kitchens
- Boiler rooms
- Generator rooms
- Parking areas

Flame Detectors

Flame detectors detect ultraviolet (UV) or infrared (IR) radiation emitted by flames. They respond very quickly.

Used in:

- Fuel storage areas
- Chemical plants
- Oil & Gas industries
- Aircraft hangars

Manual Call Point (MCP)

A Manual Call Point allows a person to manually activate the fire alarm after discovering a fire. It is commonly called a Break Glass Unit.

Usually installed:

- Near exits
- Staircases
- Corridors

Anyone discovering a fire should activate the nearest MCP after ensuring personal safety.

Hooters / Sounders / Sirens

These devices produce a loud sound to warn occupants.

Some systems also include flashing lights (strobes) for people with hearing impairments.

Fire Alarm Bell

Fire alarm bells provide an audible warning throughout the building.

Everyone should recognize this sound and immediately follow evacuation procedures.

Power Supply

Every fire alarm system has:

- Main electrical supply
- Standby battery backup
-

The battery allows the system to continue operating during a power failure.

4. Types of Fire Alarm Systems

Conventional Fire Alarm System

In a conventional system, detectors are divided into zones.

The control panel identifies the zone where the alarm originated but not the exact detector.

Suitable for:

- Small buildings
- Schools
- Small offices
- Shops

Advantages:

- Simple
- Cost-effective
- Easy to maintain

Addressable Fire Alarm System

In an addressable system, every detector has its own unique address. The control panel identifies the exact detector that activated.

Suitable for:

- Hospitals
- Hotels
- Shopping malls
- High-rise buildings
- Large industries

Advantages:

- Faster fault identification
- Accurate fire location
- Better monitoring
- Reduced maintenance time

5. Types of Fire Detectors

Smoke Detector

Detects smoke particles.

Best for:

- Offices
- Bedrooms
- Corridors

Heat Detector

Detects high temperature

Best for:

- Kitchens
- Generator Rooms
- Boiler Rooms

Flame Detector

Detects flames using UV or IR sensors

Best for:

- Fuel storage
- Chemical industries
- Oil & Gas plants

Multi-Sensor Detector

- Uses both smoke and heat sensing technology.
- Provides improved accuracy and reduces false alarms.
- Common in modern commercial buildings.

6. What Should You Do When a Fire Alarm Sounds?

If the fire alarm activates:

- Stay calm.
- Stop your work immediately.
- Leave the building using the nearest safe exit.
- Do not use lifts (elevators).
- Assist children, elderly people, and persons with disabilities if it is safe to do so.
- Proceed to the assembly point.
- Wait for further instructions.
- Do not re-enter the building until authorized.
-

Always treat every alarm as a real emergency unless informed otherwise.

7. Common Causes of False Alarms

Sometimes alarms activate without an actual fire.

Common reasons include:

- Steam from kitchens
- Dust during construction
- Aerosol sprays
- Smoking near detectors
- Poor maintenance
- Insects inside detectors
-

Even if a false alarm is suspected, evacuation procedures should still be followed until the situation is confirmed.

8. Maintenance of Fire Alarm Systems

Regular maintenance ensures reliable operation.

Maintenance includes:

- Cleaning detectors.
- Testing alarms.
- Testing batteries.
- Checking wiring.
- Testing manual call points.
- Inspecting sounders and flashing lights.
-

Maintenance should only be performed by trained technicians.

Key Takeaways

- ✓ Fire alarm systems provide early warning.
- ✓ Early detection saves lives.
- ✓ Smoke detectors detect smoke.
- ✓ Heat detectors detect high temperature.
- ✓ Manual Call Points allow anyone to activate the alarm.
- ✓ Never ignore a fire alarm.

Safety Tips

- Learn the sound of your building's fire alarm.
- Know the location of the nearest Manual Call Point.
- Never block fire alarm devices.
- Report damaged detectors immediately.
- Participate actively in fire drills.
- Never tamper with fire alarm equipment.

MODULE 8

FIXED FIRE FIGHTING SYSTEMS

Learning Objectives

After completing this module, learners will be able to:

- Understand what fixed fire fighting systems are.
- Identify the different types of fixed fire protection systems.
- Explain the purpose and working of hydrant systems.
- Understand hose reels and sprinkler systems.
- Learn about automatic fire suppression systems.
- Recognize the importance of regular inspection and maintenance.

1. Introduction to Fixed Fire Fighting Systems

A **Fixed Fire Fighting System** is a fire protection system that is permanently installed inside a building or industrial facility. Unlike portable fire extinguishers, these systems remain fixed in one location and are designed to control or extinguish fires automatically or with the help of trained personnel.

These systems are commonly installed in:

- High-rise buildings
- Shopping malls
- Hospitals
- Hotels
- Factories
- Warehouses
- Airports
- Educational institutions
- Commercial complexes

Fixed fire fighting systems provide continuous protection and are capable of handling larger fires than portable extinguishers.

2. Why are Fixed Fire Fighting Systems Important?

Large fires spread rapidly and cannot usually be controlled using portable extinguishers alone.

Fixed fire fighting systems help to:

- Detect and control fires quickly.
- Protect lives and property.
- Reduce fire damage.
- Support firefighters during emergencies.
- Control fire until emergency services arrive.
- Meet legal and safety requirements.

These systems are an essential part of modern building safety.

3. Fire Hydrant System

A **Fire Hydrant System** is a network of pipes that supplies water under pressure for firefighting.

It is one of the most commonly installed fire protection systems in commercial and industrial buildings.

Main Components

- Fire Water Storage Tank
- Fire Pump
- Underground and Overhead Pipelines
- Landing Valve (Hydrant Outlet)
- Hose Pipe
- Branch Pipe and Nozzle

How It Works

- When a fire occurs:
- The fire pump starts (automatically or manually).
- Water is supplied through the pipeline.
- Firefighters connect a hose to the landing valve.
- Water is directed onto the fire through the nozzle.

Hydrant systems are mainly operated by trained personnel or firefighters.

4. Hose Reel System

A **Hose Reel** is a first-aid firefighting equipment permanently connected to the building's water supply.

It is designed for occupants to control small fires before they spread.

Components

- Hose Reel Drum
- Hose
- Nozzle
- Control Valve

Advantages

- Easy to operate.
- Continuous water supply.
- Suitable for Class A fires.
- Ideal for offices, schools, and commercial buildings.

Limitations

Hose reels should not be used on live electrical fires or flammable liquid fires.

5. Automatic Sprinkler System

An Automatic Sprinkler System is designed to detect heat and automatically discharge water over the affected area.

Each sprinkler head operates independently.

Only the sprinkler exposed to sufficient heat will activate—not all sprinklers in the building.

Main Components

- Water Storage Tank
- Fire Pump
- Sprinkler Pipes
- Sprinkler Heads
- Control Valves
- Alarm Valve

Advantages

- Automatic operation.
- Quick fire control.
- Reduces fire spread.
- Saves lives.
- Minimizes property damage.

Sprinkler systems are widely used in hotels, malls, hospitals, industries, and warehouses.

6. Deluge System (Basic Introduction)

A **Deluge System** is used in high-hazard areas where fire can spread very rapidly. Unlike a sprinkler system, all sprinkler nozzles are open.

When the system is activated, water flows through all nozzles at the same time.

Common Applications

- Aircraft Hangars
- Chemical Plants
- Transformer Yards
- Oil Refineries
- Power Plants

Deluge systems provide rapid protection for high-risk areas.

7. Fire Suppression Systems

Some areas contain equipment that could be damaged by water. In these locations, special fire suppression systems are used.

These systems may use:

- Clean Agent Gas
- Carbon Dioxide (CO₂)
- Foam
- Dry Chemical Powder

Common Locations

- Server Rooms
- Data Centres
- Electrical Control Rooms
- Archives
- Museums
- Laboratories

These systems extinguish fires without causing significant damage to sensitive equipment.

8. Fire Pumps

A Fire Pump supplies water at the required pressure to hydrants and sprinkler systems.

Without sufficient water pressure, fixed fire fighting systems cannot operate effectively.

Types of Fire Pumps

- Electric Fire Pump
- Diesel Fire Pump
- Jockey Pump

Functions

- Maintain water pressure.
- Supply water during firefighting.
- Ensure reliable system performance.

The jockey pump maintains system pressure during normal conditions, while the main fire pump starts during a fire emergency.

9. Inspection and Maintenance

Regular maintenance is essential for reliable operation.

Inspection includes:

- Checking water tank levels.
- Testing fire pumps.
- Inspecting hydrant valves.
- Testing hose reels.
- Inspecting sprinkler heads.
- Checking control valves.
- Testing alarm systems.

Maintenance should be carried out according to applicable standards and manufacturer recommendations.

10. Safety Precautions

- Never block access to hydrants or hose reels.
- Do not hang clothes or objects on hose reels.
- Keep sprinkler heads free from paint, dust, or decorations.
- Report leaking pipes or damaged valves immediately.
- Do not tamper with fire pumps or control valves.
- Participate in practical demonstrations and fire drills.

Key Takeaways

- ✓ Fixed fire fighting systems provide continuous fire protection.
- ✓ Hydrant systems supply water for firefighting operations.
- ✓ Hose reels help control small Class A fires.
- ✓ Sprinkler systems activate automatically when exposed to heat.
- ✓ Fire pumps provide the water pressure required for firefighting.
- ✓ Regular inspection and maintenance ensure system reliability.

Practical Activity

The trainer should demonstrate:

- Identification of hydrant system components.
- Opening and closing a landing valve.
- Rolling and unrolling a hose reel.
- Basic operation of a hydrant hose and nozzle.
- Identification of different sprinkler heads.
- Introduction to the fire pump room.

Students should be encouraged to observe and practice under supervision.

MODULE 9

EMERGENCY RESPONSE & FIRE EMERGENCY PROCEDURES

Learning Objectives

After completing this module, learners will be able to:

- Understand what an emergency is.
- Explain the importance of an Emergency Response Plan (ERP).
- Identify the correct actions to take during a fire emergency.
- Understand the roles and responsibilities of employees during an emergency.
- Learn how to report a fire and communicate effectively.
- Understand the importance of remaining calm and following instructions.

1. What is an Emergency?

An **emergency** is an unexpected situation that threatens the safety of people, property, or the environment and requires immediate action.

Examples of emergencies include:

- Fire
- Gas leakage
- Explosion
- Electrical accidents
- Building collapse
- Chemical spill
- Natural disasters such as earthquakes or floods

During an emergency, every second is important. A quick and correct response can save lives.

2. What is an Emergency Response Plan (ERP)?

An **Emergency Response Plan (ERP)** is a written plan that explains how people should respond during an emergency.

It helps everyone know:

- What to do.
- Where to go.
- Whom to contact.
- How to evacuate safely.
- How to assist others.

Every workplace should have an Emergency Response Plan that is known to all employees.

3. Objectives of an Emergency Response Plan

The main objectives of an ERP are to:

- Protect human life.
- Reduce panic.
- Ensure safe evacuation.
- Protect property.
- Support emergency services.
- Minimize business disruption.
- Ensure a quick and organized response.

A well-prepared plan helps avoid confusion during emergencies.

4. What Should You Do If You Discover a Fire?

If you are the first person to notice a fire:

Step 1: Stay Calm

Do not panic. Panic can lead to poor decisions and accidents.

Step 2: Raise the Alarm

Immediately activate the nearest Manual Call Point (**Break Glass Unit**) or inform nearby people by shouting **“Fire! Fire!”**

This alerts everyone in the building.

Step 3: Inform Emergency Services

Call the Fire Department and provide:

- Your name
- Building address
- Exact location of the fire
- Type of fire (if known)
- Contact number

Give clear and accurate information.

Step 4: Use a Fire Extinguisher (If Safe)

Only attempt to extinguish the fire if:

- The fire is small.
- You have been trained.
- You have the correct extinguisher.
- There is a clear escape route behind you.

If the fire grows, leave immediately.

Step 5: Evacuate

- Leave the building using the nearest safe exit.
- Do not delay to collect personal belongings.
- Proceed directly to the assembly point.

5. Actions During a Fire Emergency

During a fire emergency:

- Stay calm.
- Follow instructions from emergency coordinators.
- Walk quickly but do not run.
- Help children, elderly people, and persons with disabilities if it is safe to do so.
- Close doors behind you if possible to slow the spread of fire and smoke.
- Use staircases, not lifts.
- Do not return to the building until authorized.

6. Emergency Communication

Good communication saves lives.

Information should be:

- Clear
- Accurate
- Immediate
- Calm

Avoid spreading rumours or incorrect information.

Only authorized personnel should communicate with emergency services and the media.

7. Emergency Contact Numbers

Every workplace should display important emergency numbers, such as:

- Fire Department
- Ambulance
- Police
- Hospital
- Safety Officer
- Security Control Room

Employees should know where these numbers are displayed.

8. Roles and Responsibilities During an Emergency

Employees

- Report fires immediately.
- Follow evacuation procedures.
- Do not panic.
- Assemble at the designated assembly point.
- Follow instructions.

Security Personnel

- Raise the alarm.
- Call emergency services.
- Control access to the building.
- Guide firefighters to the incident location.

Fire Wardens

- Guide occupants to exits.
- Check rooms where safe to do so.
- Ensure evacuation routes remain clear.
- Report missing persons.
- Coordinate with emergency responders.

Supervisors and Managers

- Account for all employees.
- Coordinate emergency response.
- Support rescue operations if required.
- Ensure business continuity after the incident.

9. Common Mistakes During Emergencies

Avoid the following:

- Panicking.
- Running or pushing others.
- Using lifts.
- Returning to collect personal belongings.
- Hiding inside the building.
- Ignoring alarm signals.
- Blocking emergency exits.
- Attempting to fight large fires without training.

These actions can increase the risk of injury.

10. After the Emergency

Once the emergency is over:

- Remain at the assembly point until instructed.
- Do not re-enter the building without permission.
- Report any injuries.
- Inform supervisors if someone is missing.
- Participate in the incident review.
- Learn from the experience to improve future responses.

Key Takeaways

- ✓ Every emergency requires immediate action.
- ✓ Stay calm and think clearly.
- ✓ Raise the alarm as soon as a fire is discovered.
- ✓ Evacuate safely using the nearest exit.
- ✓ Never use lifts during a fire.
- ✓ Follow instructions from emergency personnel.
- ✓ Do not re-enter the building until it is declared safe.

Safety Tips

- Know your nearest emergency exit.
- Learn the location of manual call points.
- Memorize important emergency contact numbers.
- Participate in every fire drill.
- Never block emergency exits.
- Report unsafe conditions immediately.

Practical Activity

The trainer should conduct:

- Fire emergency reporting exercise.
- Manual Call Point demonstration.
- Emergency communication role-play.
- Fire extinguisher decision-making exercise.
- Building evacuation simulation.
- Assembly point attendance exercise.

Students should practice responding as if it were a real emergency.

MODULE 10

FIRE EVACUATION PROCEDURES & ASSEMBLY POINT MANAGEMENT

Learning Objectives

After completing this module, learners will be able to:

- Understand the purpose of fire evacuation.
- Explain the importance of an evacuation plan.
- Identify emergency exits and escape routes.
- Learn the correct evacuation procedures during a fire.
- Understand the role of assembly points.
- Learn the responsibilities of Fire Wardens during evacuation.
- Recognize common mistakes that should be avoided.

1. What is Fire Evacuation?

Fire Evacuation is the safe and organized movement of people from a dangerous area to a safe location when a fire or other emergency occurs.

The main purpose of evacuation is to protect human life. During a fire, smoke, heat, and toxic gases can spread quickly, making it unsafe to remain inside the building.

Every person should know how to evacuate safely before an emergency happens.

2. Why is Fire Evacuation Important?

A well-planned evacuation helps to:

- Save lives.
- Reduce injuries.
- Prevent panic.
- Ensure an organized exit.
- Help emergency responders work efficiently.
- Account for all occupants.

A few minutes of delay during a fire can make the situation much more dangerous.

3. What is an Evacuation Plan?

An Evacuation Plan is a written procedure that explains how people should leave a building safely during an emergency.

A good evacuation plan includes:

- Emergency exit locations.
- Escape routes.
- Assembly point location.
- Emergency contact numbers.
- Responsibilities of emergency team members.
- Procedures for assisting people with disabilities.
- Instructions for visitors and contractors.

Every employee should be familiar with the evacuation plan for their workplace.

4. Emergency Exits

Emergency exits are specially designed routes that allow people to leave a building quickly and safely during an emergency.

Features of Emergency Exits

- Clearly marked with EXIT signs.
- Well-lit with emergency lighting.
- Free from obstructions.
- Easy to open from inside.
- Wide enough for safe movement.

Emergency exits should never be locked or blocked.

5. Escape Routes

An **escape route** is the safest path leading from any part of the building to an emergency exit and then to the assembly point.

Good Escape Routes Should Be:

- Clearly marked.
- Well illuminated.
- Free from storage materials.
- Easy to identify.
- Regularly inspected.

Employees should know at least two escape routes from their work area whenever possible.

6. Emergency Exit Signs

Emergency exit signs guide people toward safe exits during emergencies.

Common signs include:

- EXIT
- Emergency Exit
- Fire Exit
- Staircase
- Directional Arrow

These signs are usually green and white for easy recognition.
Never remove, cover, or damage emergency signs.

7. Assembly Point

An Assembly Point is a designated safe area where everyone gathers after evacuating the building.

The assembly point should be:

- Away from the building.
- Easily accessible.
- Large enough to accommodate all occupants.
- Safe from fire, smoke, and falling debris.

Why is an Assembly Point Important?

It allows supervisors to:

- Conduct a headcount.
- Identify missing persons.
- Provide instructions.
- Coordinate with emergency services.

No one should leave the assembly point until permission is given.

8. Fire Warden Responsibilities During Evacuation

Fire Wardens play an important role in ensuring a safe evacuation.

Their responsibilities include:

- Raising the alarm.
- Guiding occupants to exits.
- Checking rooms where it is safe to do so.
- Ensuring no one uses lifts.
- Assisting elderly persons and persons with disabilities.
- Reporting missing persons.
- Coordinating with firefighters.

Fire Wardens should remain calm and lead by example.

9. Evacuation Procedure

When the fire alarm sounds:

Step 1

Stop work immediately.

Step 2

Stay calm and do not panic.

Step 3

Switch off machinery or electrical equipment if it is safe to do so.

Step 4

Leave the building using the nearest safe emergency exit.

Step 5

Do not use lifts (elevators).
Always use staircases.

Step 6

Walk quickly without running or pushing others.

Step 7

Assist anyone who requires help, provided it is safe to do so.

Step 8

Proceed directly to the assembly point.

Step 9

Report to your supervisor or Fire Warden.

Step 10

Remain at the assembly point until the "All Clear" is announced.

10. What Should You Do If You Encounter Smoke?

Smoke is often more dangerous than flames because it reduces visibility and may contain toxic gases.

If you encounter smoke:

- Stay low to the ground where the air is usually cleaner.
- Cover your nose and mouth with a cloth if available.
- Move carefully toward the nearest exit.
- Never run through thick smoke if another safe route is available.

If trapped:

- Close the door.
- Seal gaps with cloth if possible.
- Call for help.
- Signal from a window only if it is safe.

11. Assisting People During Evacuation

During evacuation, special attention should be given to:

- Children.
- Elderly people.
- Pregnant women.
- Persons with disabilities.
- Injured persons.
- Visitors unfamiliar with the building.

Assist only if it is safe to do so. Do not put yourself or others at unnecessary risk.

12. Common Mistakes During Evacuation

Avoid these mistakes:

- Panicking.
- Running.
- Pushing others.
- Using lifts.
- Returning to collect personal belongings.
- Ignoring alarms.
- Blocking exits.
- Leaving the assembly point without permission.
- Re-entering the building before the "All Clear."

These actions can delay evacuation and increase the risk of injury.

Key Takeaways

- ✓ Fire evacuation protects lives.
- ✓ Know your nearest emergency exit.
- ✓ Always use staircases during a fire.
- ✓ Proceed directly to the assembly point.
- ✓ Never return to collect belongings.
- ✓ Stay at the assembly point until instructed otherwise.
- ✓ Follow the directions of Fire Wardens and emergency responders.

Safety Tips

- Learn the evacuation plan for your workplace.
- Participate in every fire drill.
- Keep emergency exits clear at all times.
- Memorize the location of your assembly point.
- Help others if it is safe to do so.
- Stay calm and act quickly.

Practical Activity

The trainer should conduct:

- Building evacuation drill.
- Identification of emergency exits.
- Escape route walk-through.
- Assembly point headcount exercise.
- Fire Warden role-play.
- Smoke evacuation demonstration (using simulated conditions where safe).

Students should practice the complete evacuation procedure under supervision.

MODULE 11

BASIC FIRST AID DURING FIRE EMERGENCIES

Learning Objectives

After completing this module, learners will be able to:

- Understand the meaning and importance of first aid.
- Identify common injuries during fire emergencies.
- Provide basic first aid for burns, cuts, smoke inhalation, and electric shock.
- Learn the correct emergency response before medical help arrives.
- Understand the importance of calling emergency medical services.

1. What is First Aid?

First Aid is the immediate care given to an injured or ill person before professional medical help arrives.

The main aim of first aid is to:

- Save life.
- Prevent the condition from becoming worse.
- Promote recovery.
- Provide comfort until medical professionals take over.

Remember: **First Aid is temporary care, not complete medical treatment.**

2. Importance of First Aid

Knowing basic first aid can:

- Save lives.
- Reduce pain and suffering.
- Prevent serious injuries from becoming worse.
- Help during emergencies until an ambulance arrives.
- Increase confidence in handling emergencies.
-

Every workplace should have trained first aiders and a well-stocked first aid kit.

3. First Aid Kit

A first aid kit should be easily accessible and regularly checked.

A basic first aid kit may contain:

- | | | |
|-----------------------|---------------------|-------------------|
| • Adhesive bandages | • Cotton | • Scissors |
| • Sterile gauze pads | • Medical tape | • Safety pins |
| • Roller bandages | • Burn dressing | • CPR face shield |
| • Antiseptic solution | • Disposable gloves | (if available) |

Always replace used or expired items.

4. First Aid for Burns

Burns are common during fire emergencies.

Minor Burns

- Cool the burn with clean, cool running water for at least 20 minutes.
- Remove rings, watches, or tight clothing before swelling begins, if they are not stuck to the skin.
- Cover the burn with a clean, sterile, non-stick dressing.
- Seek medical advice if necessary.

Major Burns

- Call emergency medical services immediately.
- Do not remove clothing that is stuck to the burn.
- Do not apply creams, butter, toothpaste, oil, or ice.
- Cover the burn with a clean cloth or sterile dressing if possible.
- Keep the injured person calm until help arrives.

5. First Aid for Smoke Inhalation

Smoke contains harmful gases that can affect breathing.

Signs include:

- Difficulty breathing
- Persistent coughing
- Dizziness
- Headache
- Confusion

First Aid

- Move the person to fresh air if it is safe to do so.
- Loosen tight clothing.
- Keep the person comfortable.
- Monitor breathing.
- Call emergency medical services immediately.
-

Never allow the person to return to the smoke-filled area.

6. First Aid for Cuts and Bleeding

If someone has a cut:

- Wear disposable gloves if available.
- Apply direct pressure using a clean cloth or sterile dressing.
- Raise the injured limb above heart level if possible.
- Secure the dressing with a bandage.
- Seek medical attention if bleeding is severe or does not stop.

Do not remove the first dressing if it becomes soaked. Place another dressing on top and continue applying pressure.

7. First Aid for Electric Shock

Electric shock can occur during fires involving electrical equipment.

Safety First

- Do not touch the victim until the electrical power is switched off.
- Turn off the power supply or use a non-conductive object (such as dry wood) to separate the person from the electrical source, if safe to do so.

After the Power is Off

- Check for responsiveness.
- Check breathing.
- Call emergency medical services immediately.
- If trained, begin CPR if the person is not breathing normally.

8. Recovery Position

If a person is unconscious but breathing normally:

- Place them on their side in the recovery position.
- Keep the airway open.
- Monitor breathing continuously.
- Stay with the person until medical help arrives.

Do not move the person if a spinal injury is suspected unless there is immediate danger.

9. What You Should Never Do

Never:

- Apply butter, toothpaste, oil, or ink to burns.
- Burst blisters.
- Give food or drink to an unconscious person.
- Move a seriously injured person unnecessarily.
- Touch an electric shock victim before isolating the power source.
- Leave an injured person alone if they require assistance.

10. Calling for Medical Help

When calling emergency services, provide:

- Your name.
- Exact location.
- Number of injured persons.
- Type of injury.
- Whether the person is conscious and breathing.
- Contact number.

Stay on the line until instructed to disconnect.

Key Takeaways

- ✓ First aid provides immediate assistance until medical professionals arrive.
- ✓ Cool burns with clean, cool running water for at least 20 minutes.
- ✓ Move smoke inhalation victims to fresh air if safe.
- ✓ Control bleeding with direct pressure.
- ✓ Always isolate the electrical supply before assisting an electric shock victim.
- ✓ Call emergency medical services as soon as possible.

Safety Tips

- Keep a first aid kit available and fully stocked.
- Know who the trained first aider is at your workplace.
- Wear gloves when treating bleeding injuries.
- Never attempt treatment beyond your level of training.
- Always seek medical attention for serious injuries.

Practical Activity

The trainer should demonstrate:

- *Contents of a first aid kit.*
- *Applying a sterile dressing.*
- *Controlling bleeding using direct pressure.*
- *Cooling and covering a burn.*
- *Placing a casualty in the recovery position.*
- *Safe response to an electric shock incident (without live electricity).*

Students should practice these skills using training materials under supervision.

MODULE 12

PERSONAL PROTECTIVE EQUIPMENT (PPE) & FIRE SAFETY SIGNAGES

Learning Objectives

After completing this module, learners will be able to:

- Understand the importance of Personal Protective Equipment (PPE).
- Identify different types of PPE used in fire safety.
- Learn the correct use and maintenance of PPE.
- Recognize common fire safety signages.
- Understand the meaning of different safety sign colours and symbols.

1. What is Personal Protective Equipment (PPE)?

Personal Protective Equipment (PPE) refers to protective clothing and equipment worn to reduce the risk of injury while performing work.

PPE acts as the **last line of defence** when hazards cannot be completely eliminated.

Firefighters, safety officers, security personnel, and industrial workers use PPE to protect themselves from fire, heat, smoke, falling objects, chemicals, and electrical hazards.

2. Why is PPE Important?

PPE helps to:

- Protect workers from injuries.
- Reduce exposure to hazards.
- Prevent burns and cuts.
- Protect eyes, hands, feet, and the head.
- Improve workplace safety.
- Meet legal and safety requirements.

Remember: PPE reduces risk but does not eliminate hazards.

3. Types of Personal Protective Equipment

Safety Helmet

Protects the head from falling objects and impact.

Always wear the helmet correctly and fasten the chin strap.

Safety Goggles

Protect the eyes from dust, sparks, smoke, chemicals, and flying particles.

Use clean and scratch-free goggles for clear vision.

Face Shield

Provides additional protection to the face from sparks, heat, and chemical splashes.

Face shields are often used together with safety goggles.

Safety Gloves

Protect the hands from cuts, burns, heat, and chemicals.

Different gloves are designed for different tasks.

Always use the correct type of glove.

Safety Shoes

Safety shoes protect the feet from heavy objects, sharp materials, and slipping.

They usually have steel or composite toe protection and anti-slip soles.

Protective Clothing

Fire-resistant clothing protects the body from heat and flames.

Clothing should fit properly and should not have loose ends that may catch fire.

Respiratory Protection

Masks or respirators protect against smoke, dust, and harmful gases.

They should fit properly to provide effective protection.

Hearing Protection

Ear plugs or ear muffs reduce exposure to excessive noise in industrial environments.

4. Proper Use of PPE

Always remember:

- Inspect PPE before use.
- Wear the correct PPE for the task.
- Ensure PPE fits properly.
- Replace damaged PPE immediately.
- Clean PPE after use.
- Store PPE in a clean and dry place.

Never modify or misuse PPE.

5. What are Fire Safety Signages?

Fire safety signages are signs used to provide important safety information and guide people during emergencies.

They help prevent accidents and improve emergency response.

Everyone should understand the meaning of these signs.

6. Types of Safety Signages

Prohibition Signs

These signs tell you what must not be done.

Examples:

- No Smoking
- No Open Flames
- Do Not Enter

Colour: Red circle with a diagonal line.

Mandatory Signs

These signs indicate actions that **must** be followed.

Examples:

- Wear Safety Helmet
- Wear Safety Shoes
- Wear Eye Protection

Colour: Blue circle with a white symbol.

Warning Signs

These signs warn people about potential hazards.

Examples:

- High Voltage
- Flammable Material
- Hot Surface

Colour: Yellow triangle with a black symbol.

Safe Condition Signs

These signs indicate safe locations or emergency facilities.

Examples:

- Emergency Exit
- First Aid
- Assembly Point
- Emergency Escape Route

Colour: Green rectangle or square with a white symbol.

Fire Equipment Signs

These signs show the location of fire protection equipment.

Examples:

- Fire Extinguisher
- Fire Hose Reel
- Fire Alarm Call Point
- Fire Hydrant

Colour: Red rectangle or square with a white symbol.

7. Importance of Safety Signages

Safety signs help people to:

- Recognize hazards.
- Locate emergency equipment.
- Find safe exits.
- Follow safety instructions.
- Respond quickly during emergencies.

Signs should always remain visible, clean, and undamaged.

8. Common Mistakes

Avoid these mistakes:

- Not wearing required PPE.
- Wearing damaged PPE.
- Ignoring safety signs.
- Blocking safety signs with equipment.
- Removing or covering signs.
- Using the wrong PPE for the job.

Key Takeaways

- ✓ PPE protects workers from workplace hazards.
- ✓ Always inspect PPE before use.
- ✓ Use the correct PPE for each task.
- ✓ Understand the meaning of safety signs.
- ✓ Never ignore safety signages.
- ✓ Safety signs help prevent accidents and save lives.

Practical Activity

The trainer should demonstrate:

- *Correct wearing of a safety helmet.*
- *Inspection of gloves and safety shoes.*
- *Proper use of goggles and face shields.*
- *Identification of common safety signs.*
- *PPE selection for different workplace tasks.*

Students should identify each PPE item and explain its purpose.

MODULE 13

ELECTRICAL FIRE SAFETY & LPG CYLINDER SAFETY

Learning Objectives

After completing this module, learners will be able to:

- Understand the common causes of electrical fires.
- Identify electrical fire hazards.
- Learn safe practices to prevent electrical fires.
- Understand the safe handling and storage of LPG cylinders.
- Learn how to respond to LPG leaks and electrical fire emergencies.
- Understand the importance of regular inspection and maintenance.

1. Introduction

Electricity and LPG (Liquefied Petroleum Gas) are used every day in homes, offices, industries, hotels, and restaurants. Although they make our lives easier, improper use or poor maintenance can lead to serious fires, explosions, and injuries.

Most electrical and LPG-related fires can be prevented by following simple safety practices.

2. Common Causes of Electrical Fires

Electrical fires usually occur due to:

- Overloaded electrical sockets.
- Damaged or exposed wires.
- Short circuits.
- Loose electrical connections.
- Faulty electrical equipment.
- Poor maintenance.
- Using low-quality electrical accessories.
- Improper use of extension boards.

Regular inspection and safe electrical practices greatly reduce the risk of fire.

3. Electrical Fire Hazards

Common hazards include:

- Exposed live wires.
- Wet hands while operating electrical equipment.
- Damaged plugs and sockets.
- Overheated electrical appliances.
- Unauthorized electrical repairs.
- Poor cable management.

These hazards should be reported and corrected immediately.

4. Electrical Fire Safety Rules

Follow these basic safety rules:

- Do not overload electrical sockets.
- Replace damaged wires immediately.
- Use approved electrical equipment.
- Keep electrical appliances away from water.
- Switch off equipment when not in use.
- Allow only qualified electricians to carry out repairs.
- Inspect electrical systems regularly.

Good housekeeping also reduces electrical fire risks.

5. What to Do During an Electrical Fire

If an electrical fire occurs:

Step 1

Stay calm and raise the alarm.

Step 2

If it is safe to do so, switch off the electrical power from the main supply.

Step 3

Use a **CO₂ Fire Extinguisher or an ABC Dry Chemical Powder Extinguisher**.
These extinguishers are suitable for electrical fires.

Step 4

Never use water on a live electrical fire, as it can cause electric shock.

Step 5

If the fire cannot be controlled immediately, evacuate the area and call the Fire Department.

6. Introduction to LPG

ILPG (Liquefied Petroleum Gas) is a highly flammable fuel commonly used for cooking, heating, and industrial processes.

It is mainly a mixture of propane and butane gases.

LPG is colourless, but a strong-smelling substance (odorant) is added so that leaks can be detected easily.

7. Safe Handling of LPG Cylinders

Always follow these safety precautions:

- Keep cylinders in an upright position.
- Store cylinders in a well-ventilated area.
- Keep cylinders away from heat and open flames.
- Do not drop or roll cylinders.
- Keep the regulator and hose in good condition.
- Turn off the cylinder valve after use.
- Use only approved regulators and hoses.

Never store LPG cylinders in basements or enclosed spaces without proper ventilation.

8. Signs of an LPG Leak

Possible signs include:

- Strong gas smell.
- Hissing sound near the cylinder or hose.
- Bubbling during a soap solution leak test.
- Difficulty lighting the burner.

If any of these signs are noticed, act immediately.

9. What to Do If LPG Leaks

If you suspect an LPG leak:

- Stay calm.
- Turn off the cylinder valve if it is safe to do so.
- Open doors and windows to improve ventilation.
- Do not smoke or use open flames.
- Do not switch electrical appliances or lights ON or OFF.
- Keep people away from the area.
- Contact the gas supplier or emergency services.

Never use a match or lighter to check for a gas leak.

10. LPG Fire Safety

If an LPG cylinder catches fire:

- Raise the alarm.
- Call the Fire Department immediately.
- If it is safe, close the cylinder valve.
- Use a Dry Chemical Powder (DCP) Fire Extinguisher to control the fire.
- Cool nearby cylinders with water from a safe distance to prevent overheating.
- Evacuate if the fire cannot be controlled safely.

Only trained personnel should attempt to control a major LPG fire.

11. Inspection and Maintenance

Regular inspection helps prevent accidents.

Check:

- LPG hose for cracks or damage.
- Regulator for proper fitting.
- Electrical wires for wear and tear.
- Plugs and sockets for damage.
- Circuit breakers for correct operation.
- Extension boards for overloading.

Replace damaged equipment immediately.

12. Common Mistakes to Avoid

Do not:

- Overload electrical sockets.
- Use damaged extension cords.
- Touch electrical equipment with wet hands.
- Use water on electrical fires.
- Smoke near LPG cylinders.
- Store LPG cylinders near heat sources.
- Ignore the smell of leaking gas.

Key Takeaways

- ✓ Electrical fires are often caused by faulty wiring and overloaded circuits.
- ✓ Use CO₂ or ABC extinguishers for electrical fires.
- ✓ Never use water on live electrical equipment.
- ✓ Store LPG cylinders upright and in well-ventilated areas.
- ✓ If LPG leaks, ventilate the area and avoid operating electrical switches.
- ✓ Regular inspection and maintenance prevent accidents.

Safety Tips

- Keep electrical installations in good condition.
- Use only certified electrical products.
- Replace damaged cables immediately.
- Check LPG hoses and regulators regularly.
- Learn the location of the main electrical switch and LPG shut-off valve.
- Report electrical and gas hazards without delay.

Practical Activity

The trainer should demonstrate:

- Identification of damaged electrical cables.
- Safe use of electrical sockets and extension boards.
- Correct operation of the main electrical isolator.
- Safe LPG cylinder installation.
- Leak testing using a soap solution.
- Correct use of CO₂ and DCP fire extinguishers for electrical and LPG fires.

Students should practice identifying unsafe electrical and LPG conditions under supervision.

MODULE 14

FIRE PREVENTION IN HOMES, OFFICES & INDUSTRIES

Learning Objectives

After completing this module, learners will be able to:

- Understand the importance of fire prevention.
- Identify common fire hazards in different environments.
- Learn safe practices to prevent fires.
- Understand the importance of housekeeping and maintenance.
- Develop a fire safety mindset for home and workplace.

1. What is Fire Prevention?

Fire Prevention means taking steps to stop a fire from starting. It involves identifying fire hazards, reducing risks, and following safe work practices.

The best way to deal with a fire is to **prevent it from occurring**.

Fire prevention is everyone's responsibility—not just the responsibility of the Fire Department or Safety Officer.

2. Why is Fire Prevention Important?

Fire prevention helps to:

- Save lives.
- Protect property.
- Prevent injuries.
- Reduce financial losses.
- Protect the environment.
- Ensure business continuity.
- Improve workplace safety.

A small amount of care and attention can prevent major accidents.

3. Common Fire Hazards at Home

Common causes of fire at home include:

- Unattended cooking.
- LPG gas leaks.
- Overloaded electrical sockets.
- Damaged electrical wiring.
- Smoking materials.
- Burning candles left unattended.
- Children playing with matches or lighters.

Prevention Tips

- Never leave cooking unattended.
- Turn off the LPG cylinder after use.
- Keep matches and lighters away from children.
- Replace damaged electrical wires.
- Avoid overloading extension boards.
- Install smoke alarms where possible.

4. Common Fire Hazards in Offices

Office fire hazards include:

- Overloaded power strips.
- Faulty office equipment.
- Poor cable management.
- Blocked emergency exits.
- Improper storage of paper and files.
- Smoking in prohibited areas.

Prevention Tips

- Switch off equipment after office hours.
- Keep exits clear at all times.
- Maintain electrical equipment regularly.
- Store documents safely.
- Follow the workplace fire safety policy.

5. Common Fire Hazards in Industries

Industrial fire hazards may include:

- Flammable liquids.
- Welding and cutting operations.
- Electrical machinery.
- Chemical storage.
- Hot work.
- Poor housekeeping.
- Fuel storage.

Prevention Tips

- Store chemicals properly.
- Follow permit-to-work procedures.
- Keep ignition sources away from flammable materials.
- Use appropriate PPE.
- Conduct regular inspections.
- Ensure fire protection systems remain operational.

6. Good Housekeeping

Good housekeeping is one of the simplest and most effective ways to prevent fires. It includes:

- Keeping workplaces clean.
- Removing combustible waste regularly.
- Keeping exits and walkways clear.
- Proper storage of materials.
- Cleaning oil and chemical spills immediately.
- Avoiding unnecessary clutter.

A clean workplace is a safer workplace.

7. Safe Storage of Flammable Materials

Flammable materials should be stored carefully.

Follow these guidelines:

- Store in approved containers.
- Keep away from heat and open flames.
- Store in well-ventilated areas.
- Clearly label all containers.
- Keep only the required quantity at the workplace.
- Never mix incompatible chemicals.

8. Fire Prevention Responsibilities

Employees

- Follow safety procedures.
- Report hazards immediately.
- Use equipment correctly.
- Keep the workplace clean.
- Participate in fire drills.

Supervisors

- Ensure safety procedures are followed.
- Conduct regular inspections.
- Arrange safety training.
- Correct unsafe conditions promptly.

Employers

- Provide fire safety equipment.
- Maintain fire protection systems.
- Conduct risk assessments.
- Organize fire drills.
- Ensure compliance with safety regulations.
- Fire prevention is a shared responsibility.

9. Daily Fire Safety Checklist

Before leaving your workplace, check:

- Electrical equipment switched off.
- LPG valves closed (where applicable).
- Emergency exits clear.
- Fire extinguishers accessible.
- Combustible waste removed.
- Fire doors closed.
- Unsafe conditions reported.

A simple daily check can prevent major incidents.

Key Takeaways

- ✓ Fire prevention is the best form of fire protection.
- ✓ Identify and remove fire hazards early.
- ✓ Practice good housekeeping.
- ✓ Store flammable materials safely.
- ✓ Follow workplace safety procedures.
- ✓ Fire safety is everyone's responsibility.

Safety Tips

- Never overload electrical sockets.
- Keep emergency exits clear.
- Store flammable materials safely.
- Turn off LPG cylinders after use.
- Report damaged electrical equipment immediately.
- Participate in regular fire drills.

Practical Activity

The trainer should conduct:

- *Fire hazard identification exercise.*
- *Workplace safety inspection.*
- *Housekeeping inspection.*
- *Electrical safety inspection.*
- *LPG safety inspection.*
- *Fire prevention checklist activity.*

Students should inspect a classroom, office, or workshop and identify potential fire hazards.

Fire Safety Awareness & Emergency Response Training

1-Month Pro Level Certification

Duration: 22 Training Days

Day	Topics Covered
Day 1	Introduction to Fire Safety, Fire Hazards & Basic Safety Rules
Day 2	Fire Triangle, Fire Tetrahedron & Classes of Fire
Day 3	Types of Fire Extinguishers & Their Applications
Day 4	PASS Technique & Hands-on Fire Extinguisher Demonstration
Day 5	Fire Prevention Methods in Homes, Offices & Industries
Day 6	Emergency Response Procedures & Raising Fire Alarm
Day 7	Evacuation Planning, Escape Routes & Assembly Points
Day 8	Basic First Aid for Fire & Burn Injuries
Day 9	Electrical Fire Safety & Safe Electrical Practices
Day 10	LPG, Gas Leak & Kitchen Fire Safety
Day 11	Personal Protective Equipment (PPE) & Safety Signages
Day 12	Fire Detection & Alarm Systems – Introduction
Day 13	Fire Fighting Equipment – Hose Reel, Hydrant & Sprinkler Basics
Day 14	Emergency Communication & Incident Reporting
Day 15	Fire Risk Assessment & Hazard Identification
Day 16	Workplace Safety & Housekeeping Practices
Day 17	Mock Fire Drill – Evacuation Exercise
Day 18	Practical Fire Extinguisher Operation
Day 19	Emergency Rescue Techniques & Crowd Management
Day 20	Industrial Fire Safety – Basic Concepts
Day 21	Practical Assessment & Viva
Day 22	Final Evaluation, Safety Quiz & Course Review