Unit 4: Maintain Healthy, Safe and Secure Working Environment
Chapter 15: Prevent Accidents and Emergencies

1. Accidents and Emergencies

- **Accidents**: Unplanned events that result in injury, illness, or damage.
- **Emergencies**: Sudden, unexpected situations that require immediate action to prevent harm.

---

2. Types of Accidents

Type of Accident	Description
Slips and Falls	Due to wet floors or uneven surfaces
Cuts and Bruises	Caused by sharp objects
Burns	Result from heat, fire, or chemicals
Electrical Shocks	Due to faulty electrical appliances
Falling Objects	Objects falling from shelves or height

---

3. Types of Emergencies

Emergency Type	Example
Fire Emergency	Short circuit, flammable material ignition
Medical Emergency	Fainting, heart attack, bleeding
Natural Disasters	Earthquake, flood
Electrical Failure	Power outages, sparks from wiring
Chemical Spills	Leakage of hazardous substances

---

4. Handling Accidents and Emergencies

Steps to handle emergencies:

1. Stay calm and assess the situation.
2. Raise an alarm or alert others.
3. Provide first aid if trained.
4. Call emergency services (fire, ambulance, etc.).
5. Evacuate the area if required.

---

5. First Aid / First Aid Kit

First Aid:

- Immediate help given to an injured person before professional help arrives.

First Aid Kit Contents:

Item	Use
Bandages & Gauze	Cover wounds and stop bleeding
Antiseptic Cream/Lotion	Clean wounds and prevent infection
Scissors	Cut bandages
Adhesive Tape	Secure bandages
Pain Relievers	Reduce pain
Gloves	Maintain hygiene and safety

---

6. Electrical Safety

Precautions to avoid electrical hazards:

- Do not use damaged wires or plugs.
- Avoid touching electrical equipment with wet hands.
- Use insulated tools.
- Turn off equipment when not in use.
- Regular maintenance and inspection.

7. Evacuation

General Evacuation Procedures:

1. Stop work immediately and remain calm.
2. Do not use elevators.
3. Follow exit signs and walk to the nearest exit.
4. Proceed to the assembly point.

Workplace Evacuation:

- Every workplace must have:
  - Marked emergency exits
  - Emergency contact list
  - Evacuation plan displayed

---

8. Fire Hazards in the Workplace

1. Fire Safety Measures

- **Basic Fire Safety Rules:**
  - Do not block fire exits.
  - Turn off electrical appliances after use.
  - Do not store flammable materials near heat sources.
- **Identification of Material and Ignition Source:**
  - Identify flammable materials (paper, chemicals, etc.)
  - Identify ignition sources (open flame, electrical sparks)

2. Fire Extinguisher

Type of Fire Extinguisher	Used For
Water	Paper, wood, cloth (Class A fires)
CO_2	Electrical fires (Class C)
Foam	Flammable liquids like petrol (Class B)
Dry Powder	All types of fires

---

9. Electrical Shocks and Its Effects

- Effects of electrical shock:
  - Muscle cramps
  - Burns
  - Unconsciousness
  - Cardiac arrest

1. Electrical Rescue Technique

Steps to rescue:

1. Turn off power source immediately.
2. Use a non-conductive material (wood, plastic) to move the person away.
3. Call for medical help.
4. Perform CPR if trained and required.

2. Measures to Prevent Electrical Accidents

- Use proper insulation and grounding.
- Regularly inspect equipment.
- Train employees on electrical safety.
- Display warning signs.

---

10. Healthy Living

To maintain a safe and productive environment:

- Eat a balanced diet.
- Get regular exercise.

- Sleep 7-8 hours a day.
- Avoid smoking and alcohol.
- Maintain personal hygiene.
- Stay mentally and emotionally healthy.