

UNIT 4.2

MAN MADE DISASTERS

- A man-made disaster or **anthropogenic disaster** is a man made event, which causes sudden or progressive damage to the society.
- Examples: fire, chemical spilling, oil spilling, air or water pollution, deforestation, accidents, terrorism and war.
- Reasons: identifiable human actions, **deliberate** or **negligent**
- Negligence as in lack of proper maintenance and improper safety standards which causes industrial disasters
- Deliberate in the case of war, bomb blasts and other planned anti-governmental actions
- This chapter discusses in detail on two manmade disasters one is Bhopal Gas tragedy a specific example for a disaster which occurred due to negligence, the other is the general case of bomb threats or bomb blasts instances of a planned manmade disaster.

I. Bhopal Gas Tragedy

- ❖ Happened in Union Carbide Subsidiary Pesticide Plant of Union Carbide Corporation in the city of Bhopal, India on the night of 2 December 1984
- ❖ MIC or Methyl Isocyanate is the toxic gas which caused the tragedy. Approximately 40 tonnes of gas was released exposing more than 500,000 people
Refer text page no. 119-123 to read the extract taken from the newsletter of International Campaign for Justice in Bhopal
- ❖ The extract contains real life narratives of those who survived the tragedy documenting the intensity of the disaster and how it affected a generation who are still victims of the same.
N.B: Read the extract in text before going through the summary and important points:
 - It begins by quoting Rashida Bee, who survived but eventually lost five family members to cancer. For her “Those who lived are the unlucky ones – the lucky ones are those who died on that night”
 - People were sleeping and woke up in the middle of the night to witness the white cloud enveloping the house, streets and engulfing even the nooks and corners of the city. People ran frantically for saving their life, many had fallen down and were crushed under the running feet.
 - The entire community was wiped out and the Betwa river was flooded with the army’s enormous dumping of the corpses.
- ❖ Enquiry Report: two enquiries were conducted; one by the Government of India and one by the Union Carbide and Carbon Corporation (UCC).
- ❖ Finding of the report: a large volume of water had been introduced into the MIC tank. This caused a chemical reaction that forced the pressure release valve to open and allowed the gas to leak

Laboratory Safety Manual devised by Dr R Prakash Chandran is about the controlling measures to be followed during a chemical spillage in college laboratories. **Page no. 123-125.**

● **Read the manual given in the text carefully before going through the key points(only the key points are given below)**

- Learn about the hazards of the chemicals used in your labs
- Write and know the response procedures to confront the hazard
- Should imbibe the training and for that every laboratory should develop written spill response procedures. The factors include a listing of protective clothing and equipments along with its user manuals, evacuation zones, availability of fire suppression equipment, disposal and cleaning up materials and first aid procedures.
- Periodic review and updation of these are required
- Individuals who involve in cleaning up should be trained properly
- Regular inspection regarding the proper functioning of equipments

Recommend Procedure for Cleaning up Simple Spills

- I. Prevent the spread of dusts and vapours
- II. Neutralize acids and bases if possible
- III. Control the spread of the liquid
- IV. Collect and contain the clean-up residues
- V. Dispose of wastes
- VI. Decontaminate the area of the affected equipment
- VII. Document the procedure for future use

II. Bomb Threats

- Bomb is a container filled with explosive or inflammable material, designed to explode on impact or when detonate by a timing, proximity or remote control device.
- Bomb threats: commonly received via phone, but are also in person, email, written note or other means.
- How to handle threat via phone:
 - Remain calm, try to talk in normal manner despite being panic
 - Alert nearby person by writing down in a piece of paper
 - Keep the conversation going, note down as much information possible by giving attention to the voice and tone of the speaker, listen for the background sounds like church bell, or vehicle announcements etc.
 - Record by putting the mic of mobile phone to the earpiece of the receiver if it is a land phone
 - Evacuate the place as soon as possible by following the institution's evacuation procedure
 - Don't touch the bomb even if it is found, wait for the experts to defuse it