

ST-02

**CLEANLINESS, PERSONEL SAFETY, FIRE
PREVENTION, FIRST AID**

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- 2. Knowledge about usage of uniform, personal safety, Appliances and their usage and usage of vacuum cleaner.
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- 4. Type of fire Extinguishers and their usage.
- 5. Knowledge of fire detection, alarm system and fire fighting Agency.
- 6. Knowledge of Automatic fire Suppression system and its maintenance.
- 7. Procedure to be followed to avoid fire accident on human body.
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- 9.First Aid
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- Electric Shock
- Poison,gases and acids
- Artificial respiration
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- 10.Knowledge about Transportation,storing
Cosummables,perishables,inflammable and fragile stores.
- 11.Prevention of damage due to storm,rain,corrosion & fire

Cleanliness

>The quality or state of being clean:the practice of keeping oneself or one's surroundings clean through a stale remark,it can hardly be said too often,that personel cleanliness is one of the necessary agents to health.

>The cleaning process should be efficient,using a minimum of equipment, Cleaning agents,labour & time.

>The simplest cleaning method should be tried first,along with using the mildest cleaning agent.

>Always use the cleaning methods least harmful to the surface should be used.

Principles of cleaning

1.All soils should be removed without harming the surface being cleaned or the surrounding surfaces.

2.The surface should be restored to its original state after the cleaning processes.

3.The cleaning should proceed from high area to low wherever possible.

4.While wet cleaning an area or polishing the floor,the cleaner should walk backwards while cleaning in front of him.

5.Use of Suction/vacuum cleaning should be preferred over sweeping wherever possible.

6.Sweeping should done before dusting,and dusting before suction cleaning.

7. After the cleaning process is over, all equipment should be washed or wiped as applicable, dried & stored properly.

8. Cleaning agents should be replenished & stored properly.

9. All waste need to be discarded & the working area should be always left neat & tidy.

10. The cleaner should take all safety precautions while cleaning.

Personel Safety

- Passenger Rail Safety Tips
- **1.Stay Alert:** Train can come from either direction at an time.
- **2.Watch the Overhang:**Trains are wider than the Tracks,never sit on the edge of a station plateform.
- **3.Stand away from the Plateform Edge:**Pay attention to painted marking at plateform.
- **4.When on Board Hold ON:**Tight to poles or seats and listen carefully to directions from Train operator.
- **5.Watch your Step:**Be careful getting on and off the Train,there may be gap bet Train and plateform.
- **6.Donot Take shortcut with Your life:**Follow directional signs and markings that you know where it is safe to cross the Tracks.crossing the Tracks anywhere else is dangerous and illegal.

Conduct of Railway Servants

- A Railway Servant Shall
- 1.Wear the badge and uniform,if Prescribed and be neat and tidy in his appearance while on Duty.
- 2.Be prompt,civil and courteous.
- 3.Not Solicit or accept illegal gratification.
- 4.Give all reasonable assistance and be careful to give correct information to the public.
- 5.When asked ,give his name and Designation without hesitation.

FIRE

- Cause of fire in various places:
 - 1. Combustible dust
 - 2. Hot work
 - 3. Flammable liquid and gases
 - 4. Equipment and machinery
 - 5. Electrical hazards
 - 6. Smoking
- Prevention measures of fire
 - 1. Security provisions to help prevent wilful fire raising and arson.
 - 2. Prohibition on smoking.
 - 3. Positioning of heat sources to prevent contact with combustible material.
 - 4. Systems of work to prevent accumulation of easily ignitable rubbish or paper.

Types of fire Extinguisher & Usage

- 1. Water fire extinguisher (used for fire caused by textiles, coal, wood, cardboard, paper, fabrics)
- 2. Foam fire extinguisher (used for fires involving organic materials, flammable liquids)
- 3. Dry Powder fire extinguisher (used for fire caused by wood, fabrics, cardboard, paper)
- 4. CO₂ fire extinguisher (used for electrical fire, flammable liquid like petrol)
- 5. Wet chemical fire extinguisher (used for fire involving cooking oil or fat)

Fire Prevention and protection

- Fire protection uses tools and processes to maintain Safety and reduce hazards associated with fires.
- Fire prevention involves the steps that can prevent a fire from occurring.
- It is a function of many fire departments. The goal of fire prevention is to educate the public to take precautions to prevent potentially harmful fires. and be educated about surviving them.
- It is a proactive method of preventing emergencies and reducing used by them.

Fire Safety Tips

- 1. Check that all smoke and fire alarms are functioning properly.
- 2. Have an actionable fire plan
- 3. Never leave a room with an open flame
- 4. Have at least one fire extinguisher.
- 5. Embrace the cliché-stop, drop and roll.
- 6. To prevent fire is to remove one or more of Heat, oxygen or fuel

Fire Alarm System

- A fire alarm system has a number of devices working together to detect and warn people through visual and audio appliances when smoke, fire, carbon monoxide or other emergencies are present.
- A fire alarm system can be set off automatically by smoke detectors, heat detectors or manually. These sensors are set to detect certain levels of heat or smoke that could be an indication of fire. When smoke particles pass through the chamber of the optical detector, it scatters light that triggers the Alarm.

FIRST AID

The immediate treatment given to the victim of an accident or sudden illness before the arrival of the doctor is called First Aid.

- **AIM/OBJECTIVES**
- Save the life.
- Promote the recovery.
- Prevent the worsening of the condition.
- Arrange the transport.

Contents of the First Aid box.

- Set of splints. : One Set
- Roller Bandage : 10
- Triangular bandages : 4
- Tourniquet bandages : 2
- Cotton Wool : 4
- Safety Pins : 10
- Adhesive Dressing : 20
- Paracetamol Tab : 20
- Antiseptic Cream : 1
- Diazepam Tab : 10
- Injury Card : 1

UTILISATION OF FIRST AID BOX ITEMS: TRIANGULAR BANDAGES:

- To retain dressings and splints in position and to immobilize fractures.
- To afford support to an injured part or in the form of slings.
- To control bleeding.
- To reduce or prevent swelling.
- To assist in the lifting and carrying of casualties.
Mainly used as bandages like Head bandage, chest bandage, shoulder bandage, elbow bandage, hand bandage, hip bandage, foot bandage etc. It is also used as slings like Arm sling, Triangular sling and cuff and collar sling.

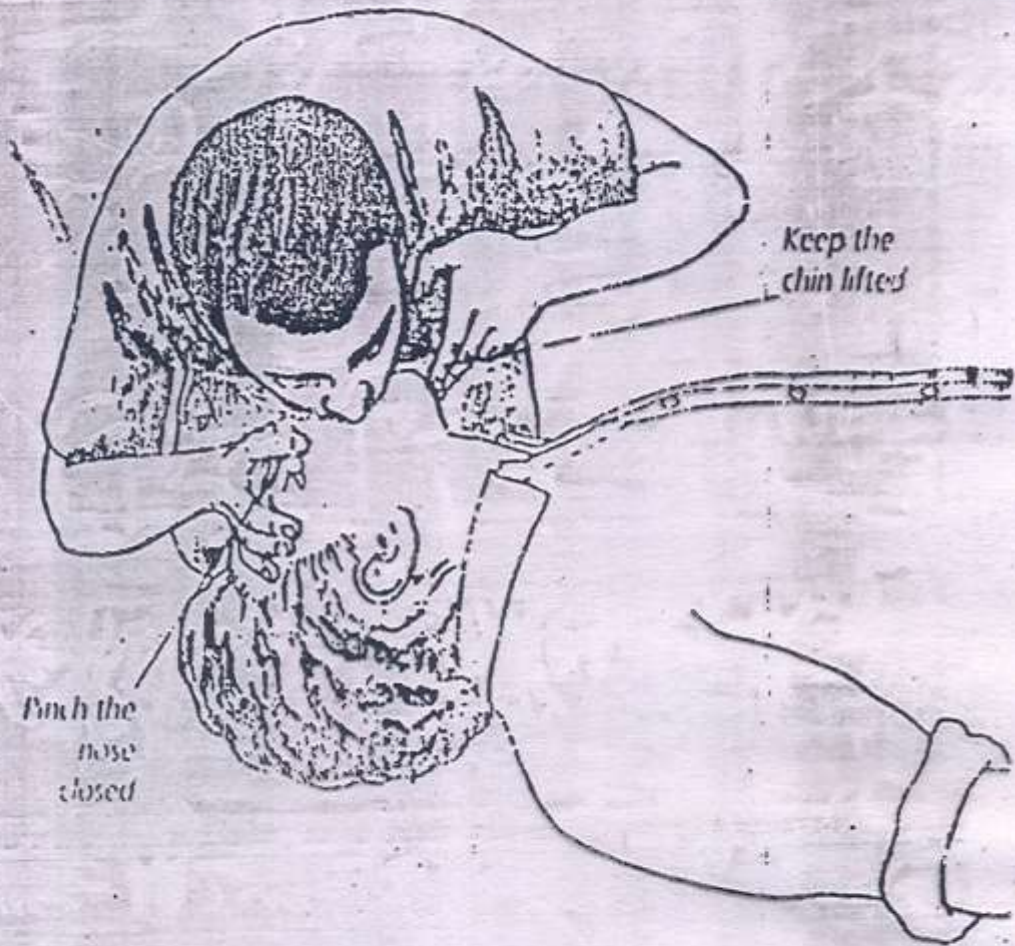
Mouth to Mouth Method of Artificial Respirations:

- Place the casualty on his back on a plain and hard surface.
- Sit by the side of the face, place the hand by the side of chin, and push it farther so that clear ventilation at throat.
- Cover the casualty's mouth with clean cloth and pinch the nostrils.
- Open your mouth, take fresh air, cover the lips of casualty with your lips, and blow the air into the mouth of casualty @ 10-12 times per minute.
- While blowing ensure that nostrils are pinched and chest is rising. If chest is not raising it indicates some obstruction in air passage clear the air passage and restart Mouth to Mouth artificial respiration. This process to be continued until the normal is resumed or Doctor arrives which ever is earlier.
- **Mouth to Nose method of artificial Respiration:** - In this method blow the air into the nose of the victim by closing the mouth of the victim with fingers.

1 Ensure that the airway is open and the head tilted well back. Pinch the casualty's nostrils closed with your index finger and thumb.

2 Take a deep breath, and seal your lips around the casualty's mouth. Blow into the casualty's mouth until you see the chest rise.

3 Remove your lips and allow the chest to fall. Continue at a rate of 10-12 breaths per minute.



Precautions after an injury:

1. Get the person to lie down on his or her back and elevate the feet higher than the person's head. Keep the person from moving unnecessarily.
2. Keep the person warm and comfortable. Loosen tight clothing and cover the person with a blanket. Do not give the person anything to drink.
3. If the person is vomiting or bleeding from the mouth, place the person on his or her side to prevent choking.
4. Treat any injuries appropriately (bleeding, broken bones, etc.).
5. Summon emergency medical assistance immediately

WOUNDS AND HEMORRHAGE (BLEEDING)

- **Definition:-** Wound is breakage of skin/tissue.
- **Types of Wounds:**
 1. Contused Wounds
 2. Lacerated Wounds
 3. Punctured Wounds
 4. Incised Wounds.

WOUNDS

- Blunt instruments cause contused wounds where there is no opening.
- Lacerated wounds are caused by irregular edges of instruments like glass pieces metal pieces, machine injuries, animal bites and occurrences where the edges of wound is irregular.
- Sharp edged instruments like Razor/knife cause incised wounds where the edge of wound is in straight line.
- Punctured wounds are caused by sharp edged instruments like needles, nails and most of gunshot wounds where less opening and more deep.

Types of Bleeding (Hemorrhage)

- Artery Bleeding – Bright red in colour and flow in jets.
- Vein Bleedings – Dark red in colour and flow continuously.
- Capillary Bleedings – Red in colour and Oozing from all parts of wound.

Danger of wounds:

- It allows precious blood to escape from body.
- It permits harmful Bacteria/virus or other injurious agents to enter into body.
- Direct Pressure Method.
- Indirect Pressure Method.

SHOCK

- **Definition:-** Shock is severe depression to vital functions of organs like brain, heart, lungs etc. due to less blood supply to the brain.
- **Established Shock:-** Established shock or true shock is due to less blood supply to the brain.
- **Causes:-**
 1. Wounds.
 2. Fractures
 3. Burns & Scalds
 4. Snake bite
 5. Sunstroke
 6. Heart attack
 7. Dog bite
 8. Electrical shock etc.

Signs & Symptoms of Shock

1. The skin may appear pale and is cool and clammy to the touch.
2. The heartbeat is weak and rapid, and breathing is slow and shallow. The blood pressure is reduced.
3. The eyes lack shine and seem to stare. Sometimes the pupils are dilated.
4. The person may feel Giddiness (symptom), Vomiting sensation, Thirsty.
5. The person may be conscious or unconscious. If conscious, the person may faint or be very weak or confused. On the other hand, shock sometimes causes a person to become overly excited and anxious.

Electrical Shock/Injuries

- We experiences minor electrical shocks from time to time. In some cases, however, even small amounts of electricity can be life threatening because they can produce unconsciousness, cardiac arrest, and cessation of breathing.
- Electrical shocks also can produce serious, deep burns and tissue injury, although often even a serious electrical burn appears as only a minor mark on the skin.
- If you find a person, whom you think has been electrocuted, look first--do not touch. He or she may still be in contact with the electrical source, and touching him or her may only pass the current through you.

Electrical Shock/Injuries Contd.

- If possible, turn off the source of electricity. If this is not possible, move the source away from you and the affected person using a non-conducting object made of cardboard, plastic, or wood while doing so ensure your safety.
- Once the person is free of the source of electricity, check the person's breathing and pulse. If either has stopped or seems dangerously slow or shallow, initiate resuscitation immediately.
- If the person is faint or pale or shows other signs of shock, lay the person down with the head slightly lower than the trunk of his or her body and the legs elevated. Treat any major burns and wait for emergency medical assistance to arrive.

POISONS

- **Definition:** Any substance (liquid, solid or gas) when enter into body in sufficient quantity which has power to injure the health or destroy life is called poison.
- A poisoning may or may not be obvious. Sometimes the source of a poisoning can be easily identified -- an open bottle of medication or a spilled bottle of household cleaner. Look for these signs if you suspect a poisoning :
 1. Burns or redness around the mouth and lips.
 2. Breath that smells like chemicals.
 3. Burns, stains, and odors on the person, his or her clothing, or on the furniture, floor, rugs, or other objects in the surrounding area.
 4. Vomiting, difficulty breathing or other unexpected symptoms.

If you can find no indication of poisoning, do not treat the person for poisoning, but call for emergency help.

Suspected poisoning? take the following steps:

1. Some products have instructions on the label specifying what to do if a poisoning occurs. If the product known to be the poison has these instructions, follow them.
2. If the person is alert, give him or her a glass of water or milk or white portion of the egg to drink. The liquid will slow the rate at which the poison is absorbed by the body. But if the person is weak, lethargic, unconscious do not give him or her anything by mouth.
3. If you cannot identify the poison or there are no instructions on the product label, call for medical help immediately.
4. Certain poisons should be vomited; others should not. If you do not know the identity of the substance swallowed, do not induce vomiting.

Swallowed Poisons:- Enter through mouth.

TREATMENT:- Act quickly and collect poison or carter and/or send messenger for doctor, before doctor arrives.

- 1. Check whether he is conscious or not if unconscious check breathing and pulse. If there is no breathing start artificial respiration and if there is no pulse start cardiac massage except corrosive chemicals like Acids or Alkalies (by giving emetic like salty water etc. or tickle the back of throat (in case of children tightly catch the jaws)).**
- 2. Dilute poison by making him to drink more water.**
- 3. Neutralize poison by giving antidote with water
Eg. Acids Chalk powder etc., Alkalies. Lemon juice, Aspirin cooking soda if not readily available washing soda, sleeping pills, Epsom/common salt.**

Swallowed Poisons:- Enter through mouth. Contd.

4. If it is doubt or proper antidote is not available give soothing drinks such as milk, white of egg, Rice/Barley/Wheat-flour/Charcoal powder mixed in water, Tender coconut water etc.

NOTE:- Among soothing drinks char-coal powder is cheaper and most effective but to get it difficult now-a-days but use presence of mind and make char-coal by burning bread or wooden piece in flame.

→ **Injected Poisons:-** Entered skin either through injection needles or by snake bites/insect bites and rabey animal bites where the First aid is required.

Electrical Shock/Injuries Contd.

- If possible, turn off the source of electricity. If this is not possible, move the source away from you and the affected person using a non-conducting object made of cardboard, plastic, or wood while doing so ensure your safety.
- Once the person is free of the source of electricity, check the person's breathing and pulse. If either has stopped or seems dangerously slow or shallow, initiate resuscitation immediately.
- If the person is faint or pale or shows other signs of shock, lay the person down with the head slightly lower than the trunk of his or her body and the legs elevated. Treat any major burns and wait for emergency medical assistance to arrive.