



# ANJUMAN-I-ISLAM'S KALSEKAR TECHNICAL CAMPUS NEW PANVEL

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SCHOOL OF ENGINEERING & TECHNOLOGY  
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# TECHNICAL WRITING

DEFINITION

WRITING INSTRUCTIONS

TECHNICAL DESCRIPTIONS

TECHNICAL PROCESS



# Writing Definitions

- *A good definition is the first step to describing an object.*
- Definition of an object / concept = Class + Differentiation
- Definitions are brief and concise preferably of a single sentence.
- While defining an object, firstly identify the class to which the object belongs to.

# Classification Of Technical Objects

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- ❑ **Instrument:** A device used for measurement or an implement used to do delicate or precision work. (thermometer)
- ❑ **Tool:** A hand held device used to perform manual or mechanical work. (chisel)
- ❑ **Machine:** A device consisting of fixed or moving parts that modifies mechanical energy and transmits it in a more useful form. (lathe)
- ❑ **Appliance:** A device designed to perform a specific function, especially an electrical device. (mixer)
- ❑ **Engine:** A machine that converts energy into mechanical force or motion. (petrol engine in bike)
- ❑ **Mechanism:** A system of parts that operate or interact like those of a machine. (steering mechanism in car or winding mechanism of wristwatch)

- **Microscope:** It is an optical instrument that uses a combination of lenses to produce magnified images of small objects unseen by the naked eye.
- **Drill:** It is a shaft-like tool with cutting edges or a pointed end for boring holes in hard materials by rotation.
- **Welding:** It is a process of joining similar metals by using heat and / or compression to form a continuum of homogenous material.
- **Food processor:** It is an electrical appliance consisting of a container with interchangeable rotating blades and used for preparing foods by shredding, slicing, chopping or blending.
- **Email:** It is a system for sending and receiving messages electronically over a computer network between personal computers.
- **Lathe:** It is a machine for shaping wood, metal, etc., by rotating the article against changeable cutting blades or tools.

*The step-by-step explanation of how to do things*

- ✓ Instructions must be clear & correct
- ✓ It must contain appropriate information
- ✓ It should have beginning and the next step should connect properly so that the complete connections are easy to grasp
- ✓ Number the steps within instructions clearly and place illustrations next to the related text

# Steps For Writing Instructions

1. Give a title (*Overhead projector / Operating Instructions For Overhead Projectors*)
2. State the purpose of Instructions. For e.g. *Follow these instructions to use Overhead Projector*
3. Number your steps in chronological order and avoid using bullets.
4. Write short steps with a verb by using Active voice. For e.g. *Sugar must be added. / Add a spoonful of sugar.*
5. Place hazard notations wherever necessary to pre-warn the reader or user.

# Categories Of Hazard Notation

**1 Precaution:** An action taken in advance to protect against possible danger, failure or injury; a safeguard.

*Example: Use gloves to safeguard your hands.*

**2 Note:** Important information necessary to perform a task effectively.

*Example: The distance between the projector and screen will determine the image size.*

**3 Caution:** The potential of damage or destruction of equipment.

*Example: Do not overload the washing machine beyond specified capacity.*

**4 Warning:** The potential for serious personal injury.

*Example: Do not expose to open flame as it is highly inflammable.*

**5 Danger:** The potential for death.

*Example: 550 volt live overhead wire.*



# Instructions For Using Lift / Elevator

*The following instructions will help you in using an elevator:*

- 1) Press the “Call” button. This will bring the lift to your floor.
- 2) Open the entry door.

**Note:** Open only when the lift has come to a complete stop on your floor.

**Warning:** Verify that the elevator has properly leveled at the landing to avoid tripping or falling before entering or exiting.

- 3) Slide the gate open (If it is not equipped with an automatic operator)

**Precaution:** Always use the gate handle.

- 4) Enter the lift
- 5) Close the entry door.

**Note:** The elevator will not operate unless the gate is completely closed.

- 6) Close the sliding gate.

**Note:** The elevator will not operate unless the gate is completely closed.

- 7) Press the desired floor button.
- 8) Wait the elevator to come to a complete stop.
- 9) Exit the elevator.
- 10) Close the gate and entry door.

**Note:** The elevator will not respond to another call if both the gate and entry door, are not completely closed.

**Danger:** Never extend any part of the body or objects through the gate while operating.

# Object Description

*Description of an object focuses on physical appearance, component parts and working of the object.*

## 1) Definition

## 2) Description

- Order in which they function or
- Order of importance or
- Spatial organization (outside-inside, top-bottom)

## 3) Working

- ✓ Show how an object operates
- ✓ Write in passive voice

## 4) Labeled diagram

# Example: Thermometer

## **Definition:**

A thermometer is an instrument for measuring temperature having a glass tube with a bulb containing mercury which expands and rises as temperature increases.

## **Components:**

1. **Tube:** A thermometer consists of a sealed glass tube containing mercury.
2. **Bulb:** There is a small bulb at the end of the tube containing mercury.
3. **Mercury:** The thermometer contains 0.5 to 1gm of mercury, which rises with the increase in temperature.
4. **Markings:** The thermometer is marked in degrees of Celsius or Fahrenheit. The mercury will rise or contract in the tube, stopping at the correct temperature.

The clinical thermometer is a small tubular instrument of thick glass having a small vacuum tube of uniform bore closed at one end and connected at the other end with a mercury chamber. A Celsius or Fahrenheit scale is etched on the front of the thermometer; opposite to this the glass is milky opaque to facilitate reading the temperature.

The volume of a certain compound varies according to its temperature. As temperature drops, the volume of the mercury shrinks, and it expands as the temperature increases. So, when heat is applied, the mercury expands and rises from the chamber past a narrowed point and up the small tube.

The level at which the meniscus of mercury rises in the narrower tube indicates the temperature of the mass of fluid in the bulb of the thermometer, when compared against a scale. This narrowed point prevents the mercury from sinking back until shaking forces it down.

**Diagram:**

**Clinical thermometer**

