## 3.2 CLASSIFICATION OF AN AIRPORT

### AIRPORT

An airport is a location where aircraft such as airplanes take off and land. It is a facility where passengers connect from ground transportation to air transportation. Aircraft may also be stored or maintained at an airport. An airport should have runway for takeoffs and landings, buildings such as hangars and terminal buildings.

### AIRPORTS ARE CLASSIFIED INTO DIFFERENT TYPES

1) Based on Take-off & Landing.

2) Based on Aircraft approach speed.

3) Based on Function.

4) Based on Geometric Design.

5) Based on aircraft wheel characteristics.

### BASED ON TAKE-OFF & LANDING

Aircraft can have different ways to take off and land. Conventional airplanes accelerate along the ground until sufficient lift is generated for takeoff, and reverse the process to land. Some airplanes can take off at low speed, this being a short takeoff.

a. Conventional Take-Off and Landing Airport (CTOL)
   • Runway Length > 1500 m
b. Reduced Take-Off and Landing Airport (RTOL)
   • Runway Length 1000 to 1500 m
c. Short Take-Off and Landing Airport (STOL)
   • Runway Length 500 to 1000 m
d. Vertical Take-Off and Landing Airport (VTOL)
   • Operational area 25 to 50 sq m.

## BASED ON AIRCRAFT APPROACH SPEED.

An aircraft approach category is a grouping differentiating aircraft based on the speed at which the aircraft approaches a runway for a landing.

Approach Category A- < 91

Approach Category B - 91– 120

Approach Category C - 120 – 140

Approach Category D - 141 – 165

Approach Category E - >165

## BASED ON FUNCTION.

### a. Civil Aviation

It is one of two major categories of flying, representing all non-military aviation, both private and commercial.

**• Domestic**

A domestic airport is an airport that handles only flights within the same country. Domestic airports do not have customs and immigration facilities.

**• International**

An international airport is an airport with customs and border control facilities enabling passengers to travel between countries.

### b. Military Aviation

Military aviation is the use of military aircraft and other flying machines for the purposes of conducting or enabling aerial warfare, including national airlift capacity to provide logistical supply to forces stationed in a theater or along a front.

## ICAO Airspace 101

Current ICAO airspace designations where adopted in 1990, with the U.S. adopting the same classifications, though used differently in 1993. In case you didn't know, the U.S. had 20 different types of airspace designations prior to 1993. Basically under ICAO, there is controlled airspace and uncontrolled airspace.

## Controlled Airspace

Controlled Airspace is defined as airspace of defined dimensions within which air traffic control service is provided to IFR flights and to VFR flights in accordance with the airspace classification. Under ICAO, controlled airspace is defined as:

**Class A:**

IFR flights only are permitted, all flights are provided with air traffic control service and are separated from each other.

**Class B:**

IFR and VFR flights are permitted, all flights are provided with air traffic control service and are separated from each other.

**Class C:**

IFR and VFR flights are permitted, all flights are provided with air traffic control service and IFR flights are separated from other IFR flights and from VFR flights. VFR flights are separated from IFR flights and receive traffic information in respect of other VFR flights.

**Class D:**

IFR and VFR flights are permitted and all flights are provided with air traffic control service, IFR flights are separated from other IFR flights and receive traffic information in respect of VFR flights, VFR flights receive traffic information in respect of all other flights.

**Class E:**

IFR and VFR flights are permitted, IFR flights are provided with air traffic control service and are separated from other IFR flights. All flights receive traffic information as far as is practical. Class E shall not be used for control zones.

**Uncontrolled Airspace**

Generally under ICAO, uncontrolled airspace is as follows:

**Class F:**

IFR and VFR flights are permitted, all participating IFR flights receive an air traffic advisory service and all flights receive flight information service if requested.

**Class G:**

IFR and VFR flights are permitted and receive flight information service if requested.