**UNIT I**

**AIRPORT PLANNING AND DESIGN**

**PART A**

1. A.1. what is the role of cross wind component in runway orientation?

1. Preliminary information
2. Head Wind
3. Cross Wind Component
4. Wind Coverage
5. Wind Rose Diagram

1. A.2. Enumerate the various factors to be considered in geometric design of taxi-way?

1. Length of Taxi way
2. Longitudinal Gradient
3. Rate of change of Longitudinal Gradient
4. Sight distance
5. Transverse gradient
6. Turning radius
7. Width of taxi way

1. A.3. what are the corrections for basic runway length?

1. Correctionfor elevation
2. Correctionforgradient
3. Correctionfortemperature

1. A.4. Define the term cross wind component and wind coverage.

CrosswindComponent:

Itisnotpossibletogetthedirectionofoppositewindparalleltothecenter-lineof therunwaylengtheverydayorthroughouttheyear.Forsomeperiodoftheyearatleast, thewindmayblowmakingsomeangleөwiththedirectionof thecenter-line of the runwaylength.IfVkmph.isthevelocityoftheinclinedopposingwind,itscomponent Vsinө,whichisnormaltothecenterlineof therunwaylength,iscalledthecrosswind component.

Windcoverage:

Thepercentageoftimeinayearduringwhichthecrosswindcomponentremains withinthelimitof25kmph.is calledthewindcoverageoftherunway.

1. A.5. Define the minimum circling radius.

A circling approach is defined as a visual maneuver (not VFR) performed after accomplishing an instrument approach to align the aircraft with the landing runway.Most of us have been taught that a circle is simply a maneuver at the end of a straight‑in approach that cannot be completed as a straight‑in. Although this statement is in some cases correct, it can also be quite misleading.

1. A.6. what is stop way?

 A rectangular area on the ground at the end of a runway in the direction of takeoff, designated and prepared by the competent authority

1. A.7. what are the components of an airport?

1. Runway
2. Taxiway
3. Terminal buildings
4. Air side
5. Land side
6. Holding area
7. Holding bay
8. Parking Facilities

1. A.8. List six passenger facilities required at the airport.

1. Arrival
2. Check in
3. Waiting
4. Security screening
5. Departure
6. Deplaning