

Annex A to AMC/GM Part 147 - Module 8 Basic aerodynamics

CASA module Examinations subjects	CASA mech basics exams equavelant	CASA avionic basics exams equavelant
Module 8 Basic aerodynamics (B1 & B2)		
8.1 Physics of the atmosphere		
International Standard Atmosphere (ISA), application aerodynamics.	BB	IA or QB
8.2 Aerodynamics		
Air flow around a body;	BB	QB
Boundary layer, laminar and turbulent flow, free stream flow, relative airflow, up wash and downwash, vortices, stagnation;	BB	QB
The terms: camber, chord, mean aerodynamic chord, profile (parasite) drag, induced drag, centre of pressure, angle of attack, wash in and washout, fineness ratio, wing shape and aspect ratio;	BB	QB
Thrust, weight, aerodynamic resultant;	BB	QB
Generation of lift and drag: angle of attack, lift coefficient, drag coefficient, polar curve, stall;	BB	QB
Aerofoil contamination including ice, snow, frost.	BB	Nil
8.3 Theory of flight		
Relationship between lift, weight, thrust and drag;	BB	QB
Glide ratio;	BB	QB
Steady state flights, performance;	BB	QB
Theory of the turn;	BB	QB
Influence of load factor: stall, flight envelope and structural limitations;	BB	QB
Lift augmentation.	BB	QB
8.4 Flight stability and dynamics		
Longitudinal, lateral and directional stability (active and passive).	BB	QB