

TABLE OF CONTENT

L Tiber	NO I PULL HAL
Foreword	Viemple Test 1
Questions Legend	Wample Test 2
PRINCIPLES OF FLIGHT. AFRONIANE	
PRINCIPLES OF FLIGHT – AEROPLANE	namena nema
SUBSONIC AERODYNAMICS	1
Basics, laws and definitions	uesticus axei
The two-dimensional airflow about an aerofoil	13
The coefficients	17
The three-dimensional airflow about an aeroplane	19
The total drag	24
The ground effect	27
The relation between the lift coefficient and the speed for constant lift	29
The stall	30
CLmax augmentation	40
Means to decrease the CL – CD ratio, increasing drag	47
The boundary layer	48
Special circumstances	49
TRANSONIC AERODYNAMICS	50
The Mach number definition	50
Normal shockwaves	53
Means to avoid the effects of exceeding Mcrit	59
SUPERSONIC AERODYNAMICS	62
Oblique shockwaves	62
STABILITY	65
Condition of equilibrium in stable horizontal flight	65
Methods of achieving balance	66
Longitudinal stability	66
Static directional stability	72
Static lateral stability	73
Dynamic lateral stability	76
CONTROL of that the JAA has not supplied the correct answers for some of the quest	ons contain 77
General it is not responsible for its content. Our answers for these questions a	ore based p. 77
Pitch control	78
Yaw control	80
Roll control	81
Interaction in different planes (yaw/roll)	84
Means to reduce control forces	85
Mass balance	89
Trimming	90
LIMITATIONS	94
Operating limitations	94
Manoeuvring envelope	96
Gust envelope	97
PROPELLERS	99
Conversion of engine torque to thrust	99
Engine failure or engine stop	102
Design feature for power absorption	103
Moments and couples due to propeller operation	104
FLIGHT MECHANICS	107
Forces acting on an airplane	119
Asymmetric thrust	120
Emergency descent Windshear	121
vviilusiteal	121
PRINCIPLES OF FLIGHT – HELICOPTER	
SUBSONIC AERODYNAMICS	123
HELICOPTER AERODYNAMICS	142
TILLIOUP TEN MENOD INMINIOS	1-42



JAR-FCL-1 / Subpart J	153
Sample Test 1	157
Sample Test 2	161
Correct Answers for Sample Test 1	164
Correct Answers for Sample Test 2	
Picture Suplements	167