

Module 17

Propeller

	Level		
	A	B1	B2
17.1 Fundamentals	A	B1	B2
Blade element theory; High/low blade angle, reverse angle, angle of attack, rotational speed; Propeller slip; Aerodynamic, centrifugal, and thrust forces; Torque; Relative airflow on blade angle of attack; Vibration and resonance.	1	2	-
17.2 Propeller Construction	A	B1	B2
Construction methods & materials used in wooden, composite & metal propellers; Blade station, blade face, blade shank, blade back & hub assembly; Fixed pitch, controllable pitch, constant speed propeller; Propeller/spinner installation.	1	2	-
17.3 Propeller Pitch Control	A	B1	B2
Speed control & pitch change methods; Feathering & reverse pitch; Overspeed protection.	1	2	-
17.4 Propeller Synchronising	A	B1	B2
Synchronising & synchrophasing equipment.	-	2	-
17.5 Propeller Ice Protection	A	B1	B2
Fluid & electrical de-icing equipment.	1	2	-
17.6 Propeller Maintenance	A	B1	B2
Static and dynamic balancing; Blade tracking; Assessment of blade damage, erosion, corrosion, impact damage, delamination; Propeller treatment/repair schemes; Propeller engine running.	1	3	-
17.7 Propeller Storage & Preservation	A	B1	B2
Propeller preservation & depreservation.	1	2	-

