

MODULE 17. PROPELLER

	Level		
	A	B1	B2
<p><b>17.1 Fundamentals</b></p> <p>Blade element theory;</p> <p>High/low blade angle, reverse angle, angle of attack, rotational speed;</p> <p>Propeller slip;</p> <p>Aerodynamic, centrifugal, and thrust forces;</p> <p>Torque;</p> <p>Relative airflow on blade angle of attack;</p> <p>Vibration and resonance.</p>	1	2	—

	Level		
	A	B1	B2
<b>17.2 Propeller Construction</b> Construction methods and materials used in wooden, composite and metal propellers; Blade station, blade face, blade shank, blade back and hub assembly; Fixed pitch, controllable pitch, constant speed propeller; Propeller/spinner installation.	1	2	—
<b>17.3 Propeller Pitch Control</b> Speed control and pitch change methods, mechanical and electrical/electronic; Feathering and reverse pitch; Overspeed protection.	1	2	—
<b>17.4 Propeller Synchronising</b> Synchronising and synchrophasing equipment.	—	2	—
<b>17.5 Propeller Ice Protection</b> Fluid and electrical de-icing equipment.	1	2	—
<b>17.6 Propeller Maintenance</b> Static and dynamic balancing; Blade tracking; Assessment of blade damage, erosion, corrosion, impact damage, delamination; Propeller treatment/repair schemes; Propeller engine running.	1	3	—
<b>17.7 Propeller Storage and Preservation</b> Propeller preservation and de preservation	1	2	—