	Level		
	A	B1	B2
6.1 **Aircraft Materials — Ferrous**			
(a)	1	2	1
Characteristics, properties and identification of common alloy steels used in aircraft;			
Heat treatment and application of alloy steels;			
(b)	—	1	1
Testing of ferrous materials for hardness, tensile strength, fatigue strength and impact resistance.			
6.2 **Aircraft Materials — Non-Ferrous**			
(a)	1	2	1
Characteristics, properties and identification of common non-ferrous materials used in aircraft;			
Heat treatment and application of non-ferrous materials;			
(b)	—	1	1
Testing of non-ferrous material for hardness, tensile strength, fatigue strength and impact resistance.			
6.3 **Aircraft Materials — Composite and Non-Metallic**			
6.3.1 *Composite and non-metallic other than wood and fabric*			
(a)	1	2	2
Characteristics, properties and identification of common composite and non-metallic materials, other than wood, used in aircraft;			
Sealant and bonding agents.			
(b)	1	2	—
The detection of defects/deterioration in composite and non-metallic material.			
Repair of composite and non-metallic material.			
6.3.2 *Wooden structures*	1	2	—
Construction methods of wooden airframe structures;			
Characteristics, properties and types of wood and glue used in aeroplanes;			
Preservation and maintenance of wooden structure;			
Types of defects in wood material and wooden structures;			
The detection of defects in wooden structure;			
Repair of wooden structure.			

	Level		
	A	B1	B2
6.3.3 *Fabric covering*	1	2	—
Characteristics, properties and types of fabrics used in aeroplanes;			
Inspections methods for fabric;			
Types of defects in fabric;			
Repair of fabric covering.			
6.4 **Corrosion**			
(a)	1	1	1
Chemical fundamentals;			
Formation by, galvanic action process, microbiological, stress;			
(b)	2	3	2
Types of corrosion and their identification;			
Causes of corrosion;			
Material types, susceptibility to corrosion.			
6.5 **Fasteners**			
6.5.1 *Screw threads*	2	2	2
Screw nomenclature;			
Thread forms, dimensions and tolerances for standard threads used in aircraft;			
Measuring screw threads;			
6.5.2 *Bolts, studs and screws*	2	2	2
Bolt types: specification, identification and marking of aircraft bolts, international standards;			
Nuts: self locking, anchor, standard types;			
Machine screws: aircraft specifications;			
Studs: types and uses, insertion and removal;			
Self tapping screws, dowels.			
6.5.3 *Locking devices*	2	2	2
Tab and spring washers, locking plates, split pins, pal-nuts, wire locking, quick release fasteners, keys, circlips, cotter pins.			

	Level		
	A	B1	B2
6.5.4 *Aircraft rivets*	1	2	1
Types of solid and blind rivets: specifications and identification, heat treatment.			
6.6 **Pipes and Unions**			
(a)	2	2	2
Identification of, and types of rigid and flexible pipes and their connectors used in aircraft;			
(b)	2	2	1
Standard unions for aircraft hydraulic, fuel, oil, pneumatic and air system pipes.			
6.7 **Springs**	—	2	1
Types of springs, materials, characteristics and applications.			
6.8 **Bearings**	1	2	2
Purpose of bearings, loads, material, construction;			
Types of bearings and their application.			
6.9 **Transmissions**	1	2	2
Gear types and their application;			
Gear ratios, reduction and multiplication gear systems, driven and driving gears, idler gears, mesh patterns;			
Belts and pulleys, chains and sprockets.			
6.10 **Control Cables**	1	2	1
Types of cables;			
End fittings, turnbuckles and compensation devices;			
Pulleys and cable system components;			
Bowden cables;			
Aircraft flexible control systems.			
6.11 **Electrical Cables and Connectors**	1	2	2
Cable types, construction and characteristics;			
High tension and co-axial cables;			
Crimping;			
Connector types, pins, plugs, sockets, insulators, current and voltage rating, coupling, identification codes.			