

**Subject : Material and Hardware Part B****Theory**

Topics	Level
<b>6.5 Fasteners</b> <b>6.5.1 Screw threads</b> Screw nomenclature; Thread forms, dimensions and tolerances for standard threads used in aircraft; Measuring screw threads <b>6.5.2 Bolts, studs and screws</b> 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. <b>6.5.3 Locking devices</b> Tab and spring washers, locking plates, split pins, palnuts, wire locking, quick release fasteners, keys, circlips, cotter pins <b>6.5.4 Aircraft rivets</b> Types of solid and blind rivets: specifications and identification, heat treatment	2
<b>6.6 Pipes and Unions</b> Identification of, and types of rigid and flexible pipes and their connectors used in aircraft; Standard unions for aircraft hydraulic, fuel, oil, pneumatic and air system pipes.	2
<b>6.7 Springs</b> Types of springs, materials, characteristics and applications. <b>6.8 Bearings</b> Purpose of bearings, loads, material, construction; Types of bearings and their application	2
<b>6.9 Transmissions</b> 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	2
<b>6.10 Control Cables</b> Types of cables; End fittings, turnbuckles and compensation devices; Pulleys and cable system components; Bowden cables; Aircraft flexible control systems.	2
<b>6.11 Electrical Cables and Connectors</b> 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	2