

AIRCRAFT MAINTENANCE, REPAIR AND OVERHAUL

UNIT I

Welding in Aircraft Structural Components Equipments used in welding shop and their maintenance – Ensuring quality welds – Welding jigs and fixtures – Soldering and brazing.
Sheet Metal Repair And Maintenance Inspection of damage – Classification – Repair or replacement – Sheet metal inspection – N.D.T. Testing – Riveted repair design, Damage investigation – reverse technology.

08 Hours

UNIT II

Plastics and Composites in Aircraft Review of types of plastics used in airplanes – Maintenance and repair of plastic components – Repair of cracks, holes etc. various repair schemes – Scopes.

Inspection and Repair of Composite Components:

Inspection and Repair of composite components – Special precautions – Autoclaves.

07 Hours

UNIT III

Aircraft Jacking, Assembly and Rigging Airplane jacking and weighing and C.G. Location. Balancing of control surfaces – Inspection maintenance. Helicopter flight controls. Tracking and balancing of main rotor.

07 Hours

UNIT IV

Review of Hydraulic and Pneumatic System Trouble shooting and maintenance practices – Service and inspection. – Inspection and maintenance of landing gear systems. – Inspection and maintenance of air-conditioning and pressurization system, water and waste system. Installation and maintenance of Instruments – handling – Testing – Inspection.

07 Hours

UNIT V

Inspection And Maintenance Of Auxiliary Systems: Inspection and maintenance of auxiliary systems – Fire protection systems – Ice protection system – Rain removal system – Position and warning system – Auxiliary Power Units (APUs)

Safety Practices Hazardous materials storage and handling, Aircraft furnishing practices – Equipments. Troubleshooting - Theory and practices.

07 Hours

Text Books:

1. Kroes, Watkins, Delp, “Aircraft Maintenance and Repair”, Mcgraw-Hill, New York 1992.

Reference Books:

1. Larry Reithmeir, “Aircraft Repair Manual”, Palamar Books, Marquette, 1992
2. Brimm D.J. Bogges H.E., “Aircraft Maintenance”, Pitman Publishing Corp. New York, 1940.