

LICENCE WITHOUT TYPE RATING
category "A" - pressurized Aeroplanes -Paper I

1. Hydraulic:

- * Simple systems i.e powered pump, reverse selection, pressure relief, pressure regulation LP and HP filters.
- * Types of pump.
- * Control and indication methods.
- * Variable delivery systems.
- * Accumulator / cut-out dependent systems.
- * Pressure / volume control.
- * Pressure - reducing valves.
- * Fire - resistant fluids - temperature, contamination, compatibility.
- * Pressurized reservoirs.
- * Multiple system provision.
- * Alternate systems - HYDRAT/hydraulic motors.
- * Electrically - powered and air-driven systems.
- * Leak protection systems - system isolation, "Fused" systems, priority control.
- * Internal leakage - cause and effects - acceptability

3. Landing Gear:

- * Wheels, Tyres, Shock absorbers, castering, steering methods.
- * Multiple axles and wheels.
- * Simple hydraulic brakes, i.e. master cylinder to wheel - brake unit.
- * Brake discs and calipers.
- * Main and alternate brake provision.
- * Landing and braking energy conversion.
- * Bogey beams.
- * Door sequencing.
- * Anti-skid system - electronic and mechanical - aquaplaning.
- * Landing gear unsafe protection.
- * Alternate Lowering.
- * Weight ON/Weight OFF sensing.
- * Fire protection.
- * Powered steering - retraction - self centring.
- * Auto braking.

5. Flight Controls:

- * Aileron, elevator rudder.
- * Operating systems and surfaces - manually operated.
- * Trim operating systems and surfaces - manual and electric.
- * Flap systems - electrical, hydraulic and manual.
- * Flap systems - pneumatic.
- * Simple asymmetric protection.
- * Slat systems - automatic, and manual.
- * Hydraulic.
- * Tab systems - trim, balance, servo, anti-servo, anti-balance, spring servo.
- * Stall sensing and warning - simple systems, e.g. vane or read types.
- * Basic auto pilots - simple systems.
- * Inputs into main controls - function testing - attitude, heading and height sensing.
- * Powered controls.
- * Spoils, air/speed brake, lift dump.
- * Lift augmentation - LE droop, slats/flaps.
- * Flap operating systems - large transport aircraft.
- * Flap asymmetric and alternate operation.
- * Stall sensing - stick shake.
- * Stick push / nudge.
- * Electronic control systems.