

(b) *Medical Fitness*.—He shall produce on a prescribed proforma a certificate of physical fitness from an approved Medical Board after undergoing a medical examination during which he shall have established his medical fitness on the basis of compliance with the requirements as notified by the Director General under Rule 39B;

(c) *Knowledge*.—He shall pass oral and written examinations in the following subjects—

(i) *Air Regulations*—including general flight rules, air traffic control practices and procedures and regulations concerning operation of aircraft; search and rescue; rules concerning air-transit, customs and health; knowledge of aerodromes; flight information regions, control zones and airways, communication and navigational facilities, International Conventions of Air Navigation, International conferences and agreements;

(ii) *Air Navigation*—knowledge of theoretical and practical air navigation including knowledge of aeronautical maps and charts, projections time magnetism, compasses, navigational instruments, radio and radar aids, visual and D.R. navigation, plotting and flight planning; elementary knowledge of astro-navigation and use of Nautical tables and Air Almanac;

(iii) *Aviation Meteorology*—intermediate aviation meteorology with special emphasis on aviation hazards; knowledge of aviation weather codes and plotting; aircraft observation procedures; synoptic meteorology including simple analysis and interpretation of weather charts; elementary world climatology; detailed knowledge of Indian climatology and of meteorological procedures relating to aviation;

(iv) *Aircraft and Engines*—including elementary knowledge of aerodynamics and theory of flight; general principles and elementary knowledge of design, construction, maintenance and operation of aircraft, engine and instruments; ancillary systems (e.g. fuels, hydraulic, electrical, etc.) and emergency systems, installations and equipment; basic knowledge of fuel and lubricants; loading of aircraft and weight distribution and its effect on flight characteristics; operating limitations and handling, care and pre-flight inspection. The examination shall also include questions pertaining to the class and the type of aeroplane for which an aircraft rating is desired.

(v) *Signals (Practical)*—transmission and interpretation of aural and visual signals;

(vi) *Seamanship*—Important abbreviations used in Admiralty charts; Regulations for preventing collisions at sea; lights to be carried by ships and seaplanes; Uniform system of Buoyage;

A general knowledge of Tides: Meaning of High Water (HW), Low Water (LW), Mean High Water Springs (MHWS), Mean High Water Neaps (MHWN), Mean Low Water Springs (MLWS), Mean Low Water Neaps (MLWN) and chart Datum—applicable to aircraft rating to include amphibians and seaplanes.

(d) *Experience*.—He shall produce evidence of having satisfactorily completed as a pilot of an aeroplane within a period of 5 years immediately preceding the date of application for licence, not less than 1,250 hours of flight time, which shall include: