

## **1.1 Night rating: General**

The aim of the night rating theoretical knowledge instruction syllabus referred to in sub-regulation 61.14.1(2)(a) is to ensure that the applicant has a thorough understanding of the theoretical aspects surrounding the night rating. Night flying takes place in a potentially hostile environment and applicants must understand each element of the environment in which they are operating.

### **(a) Air Law – (CAR 1.00.1; CAR 61.14.5; CAR 91.02/04/06/07; SA-CATS-OPS 91.06)**

- (i) The definition of night flying;
- (ii) The privileges and limitations associated with the night rating;
- (iii) The pilot-in-command's responsibilities;
- (iv) The equipment to be carried on board for night flying;
- (v) Aircraft lighting including navigation lights;
- (vi) VFR differences from day flying;
- (vii) Aerodrome requirements for night flying.

### **(b) Meteorology – (Air Pilot's Manual, Volume 2, Chapter 17, 20, 24 & 25)**

- (i) The formation of fog;
- (ii) Various types of fog;
- (iii) Katabatic winds;
- (iv) Mixing, veering and backing of winds at night;
- (v) Formation of ice and frost;
- (vi) Nocturnal Thunderstorms.

### **(c) Human performance – (Air Pilot's Manual, Volume 6, Chapter 1-3)**

- (i) Factors affecting night vision; the preservation of night vision;
- (ii) Visual illusions;
- (iii) Hypoxia;
- (iv) Vertigo;
- (v) Autokinesis.

### **(d) Lighting systems – (Air Pilot's Manual, Volume 5, Chapter 24-26; SA-CATS-OPS 91.06)**

- (i) External aircraft lighting;
- (ii) Internal cockpit lighting;
- (iii) Taxiway lighting;
- (iv) Runway lighting;
- (v) Approach lighting systems;
- (vi) Obstruction lighting;
- (vii) Aerodrome identification beacons;
- (viii) Where to find information on lighting systems;
- (ix) Pilot-operated lighting.