

**SECTION 1.10 FLIGHT PLANNING (FP)****Unit 1.10.1 AFPC: ATPL flight planning – all aircraft categories – *Reserved*****Unit 1.10.2 AFPA: ATPL flight planning – aeroplane****1. Reserved****2. Flight planning and flight monitoring****2.1 Practical considerations**

- 2.1.1 Complete a practical flight planning exercise using specified initial conditions and operations manual data. Other conditions may be inserted or varied en route for test purposes. The exercise is intended as a consolidated test of a candidate's ability to apply flight planning, performance and navigational principles, and will include:
- (a) determine take-off limits with consideration of the following as applicable:
    - (i) selection of runway;
    - (ii) payload/fuel uplift capability;
    - (iii) MTOW, including limits imposed by cruise or landing factors;
    - (iv) calculation of V-speeds and take-off distances;
  - (b) preparation of a weight and balance proforma:
    - (i) adjustment of load/fuel if required;
  - (c) selection of route and altitude:
    - (i) allowing for wind and temperature;
    - (ii) based on (given) forecast or actual conditions:
      - (A) synoptic;
      - (B) SIGMET;
      - (C) upper winds;
      - (D) TAF/METARs;
    - (iii) including departure, destination and alternate requirements;
  - (d) preparation of a fuel plan:
    - (i) sector fuel burns;
    - (ii) total fuel burn;
    - (iii) alternate and reserve fuel;
    - (iv) total fuel required;
  - (e) preparation of a navigation plan:
    - (i) sector times, distances, tracks;
    - (ii) headings and ground speeds;
    - (iii) minimum en route altitudes;
    - (iv) allowance for climb and descent;
  - (f) inflight computations, revisions or replanning:
    - (i) fuel state, fuel requirements, fuel reserves;
    - (ii) navigational progress:
      - (A) tracks, ETAs, en route wind;
    - (iii) diversion from track;
    - (iv) change of cruising level;
    - (v) engine-out flight;
    - (vi) holding;
    - (vii) assisting in search;

- (g) interpretation of AIP maps and symbols;
- (h) interpretation of (given) ATC requirements:
  - (i) SID and/or STAR routings;
  - (ii) DME descent steps;
- (i) calculation of the following types of CP (ETP) and PNR:
  - (i) normal;
  - (ii) engine-out;
  - (iii) depressurised.

**Unit 1.10.3      AFPH:      ATPL flight planning – helicopter****1.      Reserved****2.      Flight planning****2.1      Practical considerations**

- 2.1.1 Complete a practical flight planning exercise using specified initial conditions and operations manual data:
- (a) determine take-off limits with consideration of the following as applicable:
    - (i) payload/fuel uplift capability;
    - (ii) MTOW, including limits imposed by cruise factors;
  - (b) prepare a weight and balance proforma:
    - (i) adjustment of load/fuel if required;
  - (c) selection of route and altitude:
    - (i) allowing for wind and temperature;
    - (ii) based on (given) forecast or actual conditions from the following meteorological reports/forecasts with consideration of departure, destination and alternate requirements;
      - (iii) synoptic;
      - (iv) SIGMET;
      - (v) winds;
      - (vi) TAF, TTF, METARs;
  - (d) preparation of a fuel plan:
    - (i) sector fuel burns;
    - (ii) mid-zone weight (MZW);
    - (iii) total fuel burn;
    - (iv) alternate and reserve fuel;
    - (v) total fuel required;
  - (e) preparation of a navigation plan:
    - (i) sector times, distances, tracks;
    - (ii) headings and ground speeds;
    - (iii) minimum en route altitudes;
    - (iv) allowance for climb and descent;
    - (v) lowest safe altitudes;
  - (f) inflight computations, revisions or replanning:
    - (i) fuel state, fuel requirements, fuel reserves;
    - (ii) navigational progress, including tracks, ETAs, en route wind;
    - (iii) diversion from track;
    - (iv) change of cruising level;
    - (v) engine-out flight;
  - (g) interpretation of AIP maps and symbols;
  - (h) interpretation of (given) ATC requirements;
    - (i) SID and/or STAR routings;
    - (ii) DME and GNSS descent steps;
  - (i) calculation of the following types of CP (ETP) and PNR:
    - (i) normal;
    - (ii) engine-out.

**2.2 Pre-flight considerations**

2.2.1 Aircraft equipment fits.

2.2.2 General helicopter exemptions:

- (a) performance of straight in approaches;
- (b) turns before 500 ft after take-off;
- (c) non-requirement to conduct flight control checks before take-off;
- (d) refuelling requirements;
- (e) crew seating requirements;
- (f) hoisting, rappelling and sling loads.