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| Flight no: | NVFR(A)3.\_\_\_\_ | Trainee name & ARN: |  | | |
| Date: |  | Instructor: |  | | |
| Aircraft registration: |  | Aircraft type: |  | Flight time: |  |

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| Lesson Overview  * Introduction to night operations * Night circuits |

| PRE-FLIGHT KNOWLEDGE  Long Briefing: 0.8 hour Pre-flight Briefing: 0.3 hour  Underpinning knowledge: as required | |
| --- | --- |
| Content | |
| **Long briefing** – Introduction to Night Flying, Night Circuits   * Physiological effects * Sensory illusions * Limitations of sight * Instrumentation and aeroplane lighting requirements * Aerodrome lighting requirements * Pilot activated lighting (PAL) * Technique for aeroplane control immediately following take-off to safe height * Circuit procedures * Approach judgement * Judgement of round out height * Lighting failure | |
| **Underpinning knowledge**   * Review/expand previously introduced knowledge as appropriate * The colour and pattern of the following [NVR1 4(b)]:   + permanent threshold light   + runway threshold identification lights   + displaced threshold lighting   + runway edge lighting   + runway end lighting   + runway centreline lighting   + obstacle lighting * Method of activating pilot-activated aerodrome lighting (PAL) [NVR1 4(c)] * Method of activating Aerodrome Frequency Response Unit (AFRU) with Pilot Activated Aerodrome Lighting (PAL) options [NVR1 4(d)] * The time that PAL remains illuminated [NVR1 4(e)] * PAL warning for users that the lights are about to extinguish [NVR1 4(f)] * Operation and use of a Visual Approach Slope Indicator (VASI) system [NVR1 4(g)] * Operation and use of a Precision Approach Path Indicator (PAPI) system [NVR1 4(h)] * Conditions and causes under which visual illusions, such as ‘false horizons’, visual-cue illusions, relative motion illusions, ‘flicker effect’, ‘black hole’ illusion, and autokinesis may occur [NVR1 4(l)] | |
| **HF & NTS**   * Effective communication under normal and non-normal circumstances [NTS1 4(a)] * Task management [NTS1 4(b)] | |
| **Pre-flight briefing**   * Review flight sequences, what to expect, see & do * Check essential knowledge * Reinforce threat & error management * Reinforce significant airmanship points | |
| **Pre-flight knowledge components complete:** | **Instructor’s signature & date** |

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| Performance Standard | | |
| **3** | **2** | **1** |
| Has received training in the element, however is not able to consistently demonstrate competency to the standard required for qualification issue | Demonstrates a developing level of proficiency, and is deemed safe to conduct solo practice under direct supervision | Achieves competency to the standard required for qualification issue |

| FLIGHT TRAINING  Suggested flight time: 1.0 hour dual (Night) | | | |
| --- | --- | --- | --- |
| MOS Reference | Lesson Content (Elements & Performance Criteria) | Performance  Standard | |
| Required | Achieved\* |
| 1. NVR1.1 | Control aircraft on the ground at night |  |  |
|  | instrument and cockpit lighting are adjusted to an appropriate level for taxiing | **2** |  |
|  | ATC instructions and manoeuvres of the aircraft on the ground at night within the approved movement area as defined by aerodrome ground lighting are complied with | **2** |  |
|  | aircraft lighting to identify obstructions, other aircraft and taxiway and runway limits is used as required | **2** |  |
|  | aircraft is taxied at a speed which allows for an adequate lookout to be maintained to avoid obstructions | **2** |  |
| 1. NVR1.2 | Activate pilot activated lighting (PAL) |  |  |
|  | appropriate radiotelephone frequency is utilised to activate PAL system when within radio range | **2** |  |
|  | transmit sequence is utilised to activate PAL system | **2** |  |
|  | wind indicator lighting is monitored to determine end of activation period | **2** |  |
| 1. NVR1.3 | Take-off aircraft at night |  |  |
|  | aircraft is lined up correctly in centre of runway in take-off direction | **2** |  |
|  | line-up checks appropriate to night take-off are completed | **2** |  |
|  | take-off by reference to flare path and runway lighting and aircraft instruments is executed | **2** |  |
|  | aircraft is rotated at manufacturer’s recommended speed | **2** |  |
|  | climb attitude and control aircraft in climb, after take-off solely by reference to instruments is completed | **2** |  |
|  | alignment with runway by visual reference and lookout is established and maintained | **2** |  |
|  | after take-off, checks are performed at a safe height | **2** |  |
| 1. NVR1.4 | Fly a circuit pattern at night |  |  |
|  | perform a circuit pattern safely and in accordance with the specified procedures and approved techniques | **2** |  |
| 1. NVR1.5 | Manage emergency situations at night (simulated conditions – e.g. lighting failure, electrical failure) |  |  |
|  | (in simulated conditions) aircraft control is maintained | **2** |  |
|  | emergency situation is managed in accordance published procedures | **2** |  |
|  | electrical lighting and power sources are monitored | **2** |  |
|  | electrical lighting and power source emergency procedures are conducted as appropriate | **2** |  |
| 1. NVR1.6 | Perform a go-around |  |  |
|  | the need to conduct a go-around is recognised; | **2** |  |
|  | go-around is performed from any point on base and final approach legs | **2** |  |
| 1. NVR1.7 | Land at night, with and without the use of aircraft landing lights |  |  |
|  | circuit entry and pattern are performed with reference to runway environment | **2** |  |
|  | safe altitude is maintained by reference to aircraft instruments and runway lighting | **2** |  |
|  | aircraft is safely landed at night with and without landing lights | **2** |  |
|  | after landing checks are performed | **2** |  |
| 1. NVR2.1 | Determine aircraft meets requirements for NVFR flight |  |  |
|  | aircraft requirements for NVFR flight are determined | **2** |  |
|  | flight and navigation instruments, minimum electrical lighting and navigation equipment and any other requirements which are fitted to the aircraft are checked to ensure they are suitable and serviceable for NVFR flight | **2** |  |
| 1. NVR2.4 | Determine operational requirements |  |  |
|  | suitability of the aerodrome lighting for night operations is determined | **2** |  |
|  | curfew requirements are complied with | **2** |  |
|  | duration of flight is determined | **2** |  |
|  | total fuel requirements are calculated | **2** |  |
| 1. NVR2.10 | Comply with air traffic control rules and procedures for NVFR flights |  |  |
|  | separation from other air traffic maintained | **2** |  |
|  | airspace requirements are complied with | **2** |  |
|  | two-way communication is maintained with ATS and other aircraft | **2** |  |
|  | ATC clearances and radar vectoring instructions are complied with | **2** |  |
| 1. NTS1.1 | Maintain effective lookout |  |  |
|  | maintain traffic separation using a systematic visual scan technique at a rate determined by traffic density, visibility and terrain | **2** |  |
|  | maintain radio listening watch and interpret transmissions to determine traffic location and intentions | **2** |  |
|  | perform airspace-cleared procedure before commencing any manoeuvre | **2** |  |

\*Enter the performance standard achieved if it is different to that required

Where it has not been possible to introduce performance criteria or the trainee has not achieved the required standard, the performance criteria must be covered during the next lesson. Enter these performance criteria in the lesson record for the subsequent lesson.

| CONSOLIDATION AND/OR REMEDIAL TRAINING | | | |
| --- | --- | --- | --- |
| MOS Reference | Lesson Content (Elements & Performance Criteria) | Performance  Standard | |
| Required | Achieved |
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| DEBRIEFING |
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| Content |
| * Training review and outcomes achieved against lesson objectives and the Part 61 MOS competency standards * Recommendations for next lesson (including any carryover/remedial training) * Trainee preparation for next lesson * Training record completion and sign off |

| COMMENTS AND OUTCOME | | |
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|  | | |
| **Proceed to next training session?** | **Yes** | **No** |

| Instructor’s signature & date | Trainee’s signature & date |
| --- | --- |
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