



CANADIAN FORCES AIRCREW SELECTION CENTRE

CANADIAN FORCES AIRCREW SELECTION TESTING
CANDIDATE GUIDE

22 January 2015

It is important that you read and understand this guide prior to attending testing at the Canadian Forces Aircrew Selection Centre. This guide provides information on the Aircrew Selection Tests administered to all Pilot (PLT), Aerospace Control (AEC), and Air Combat Systems Officer (ACSO) candidates.

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INTRODUCTION

This publication is designed to help you prepare for your attendance at the Canadian Forces Aircrew Selection Centre (CFASC), which is located at Canadian Forces Base Trenton, in Ontario. Aircrew aptitude testing is a critical part of the aircrew selection process for the Pilot, Aerospace Control (AEC), and Air Combat Systems Officer (ACSO) occupations. See the Candidate Joining Instructions for specific information on CFASC requirements.

As an applicant for commissioned service with the Canadian Forces, you should be aware that our standards are high and strictly applied. The mission of CFASC is to select the next generation of leaders and aircrew for the Royal Canadian Air Force (RCAF). Successful candidates will receive lengthy, highly specialized and expensive training leading to rewarding but very demanding careers in the RCAF.

TESTING ADMINISTRATION

You will undergo two days of aircrew selection testing administered at a computer terminal. The aptitude tests are designed to assess a range of cognitive and psychomotor abilities. Each test measures specific elements of the cognitive process that have been identified as important for job and training success for specific aircrew occupations. Test results for each respective cognitive area are summarised, and together they indicate your potential for success during professional training in the specific occupation. The tests are computer based, but advanced computer-operating skills are not required.

Instructions

Before the tests commence, you will receive detailed instructions explaining how to complete each test, including practice questions which are designed to reinforce your understanding of what has to be done and familiarise you with the test requirements.

Equipment and Timing

The tests are carried out in a designated testing room with the capacity to test up to 20 candidates simultaneously. Before starting, you will be briefed about the test session, the length of the testing process and the computer equipment to be used. The computer keyboard used is of a non-standard design and certain tests may require the use of a joystick, foot pedal, headphones or a mixture of the IT equipment. Test instructions are all given on the computer monitor for you to read and understand in your own time, and there is usually a short practice session before each test. There are 10 minute rest breaks after about every hour of testing, and a longer break for lunch, but once a test has begun, you must continue to work until it is completed. All aptitude tests are timed so you should always work as **quickly** and **accurately** as possible. Try not to spend too much time on any one question, and do not be concerned if you fail to finish all the questions in each test - not all candidates do. The full test programme runs approximately 7 hours over two days, so it is a good idea to have a good breakfast, keep hydrated and feel fit beforehand.

Cheating

Cheating or the intentional deviation from test instructions in any way calls into question a candidate's integrity, trustworthiness, and professionalism, which are critical traits for

officers in the Canadian Forces. Non-compliance with test instructions will result in the immediate cessation of the aptitude testing and removal from the selection processing.

Examples of cheating or deviating from test instructions include, but are not limited to, the following:

- Use of electronic devices (e.g., calculators, apps, cell phones, etc.) in the testing room;
- Use of paper and/or writing implements when not unauthorized; or
- Writing on the desk, computer, or anything aside from the authorized use of paper.

APTITUDE TESTS

Each of the aptitude tests is designed to measure particular abilities, which in turn are grouped into categories or domains. The following is a selection of a few of the tests that form the aptitude testing session, together with an indication of the ability each is intended to reveal.

Airborne Numerical Test

This is a reasoning test designed to assess your ability to estimate answers to numerical calculations whilst under a degree of time pressure, as demanded in an airborne environment. You will have to:

- Solve mathematical problems involving time/speed/distance and fuel consumption calculations.
- Use mental arithmetic involving addition, subtraction, multiplication and division, to estimate answers. You will not be allowed to use a calculator or work out the answer on paper during the test.

You can prepare for this test by practising your mental arithmetic and calculations involving time/speed/distance and fuel consumption. The total test time, including instructions, is approximately 35 minutes and an example of the type of screen you will encounter is shown below:

Airborne Numerical Test - Instructions

Menu

- Introduction
- Speed and Fuel Consumption
- Speed and Parcel Weight

You are the operator of a large Remote Controlled Aerial Vehicle.

The Aerial Vehicle operates as part of a high-tech mail delivery service.

Always assume refuelling and deliveries and collections take no time.

Answer in whole numbers only. Always round up if the number is 0.5 or greater and round down if the answer is 0.49 or less.

Work as quickly and as accurately as possible. However you will be given marks for estimated answers.

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$$

All measurements in miles

Mission: Deliver parcel to Whiskey.

Task: Calculate arrival time.

Journey			Timings		Parcel	
Start point	Destination	Via	Time Now	Arrival Time	Yes/No	Weight (kg)
Yankee	Whiskey	Zulu	08:15		Y	220

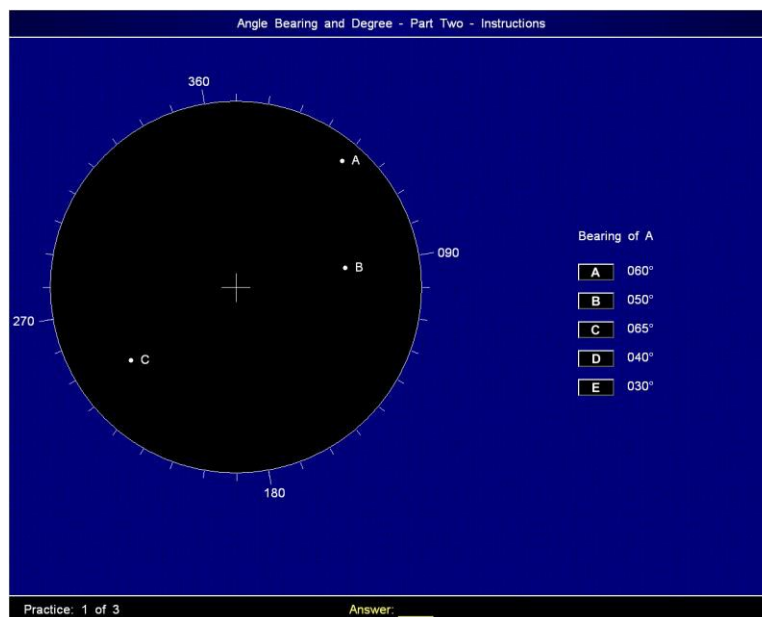
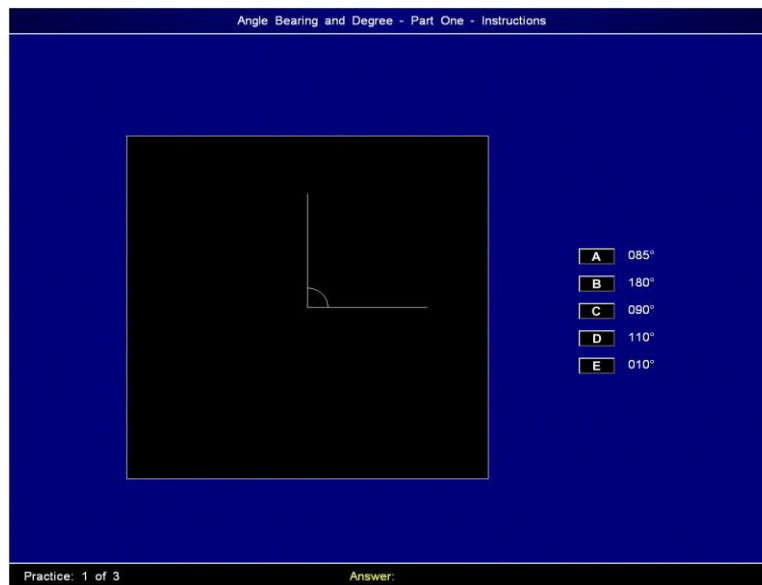
Practice: 1 of 4
Answer (Time) :
Time Left: 00:45

Angles, Bearings and Degrees Test

This is a spatial test designed to assess your judgement of angles and bearings. You will have to:

- Estimate the angle between two lines.
- Estimate the bearing of an object from a reference point.

The total test time including instructions is approximately 10 minutes. A simple way to prepare for this test is by familiarising yourself with different sizes of angles. Examples of the types of screens you will encounter are shown below:

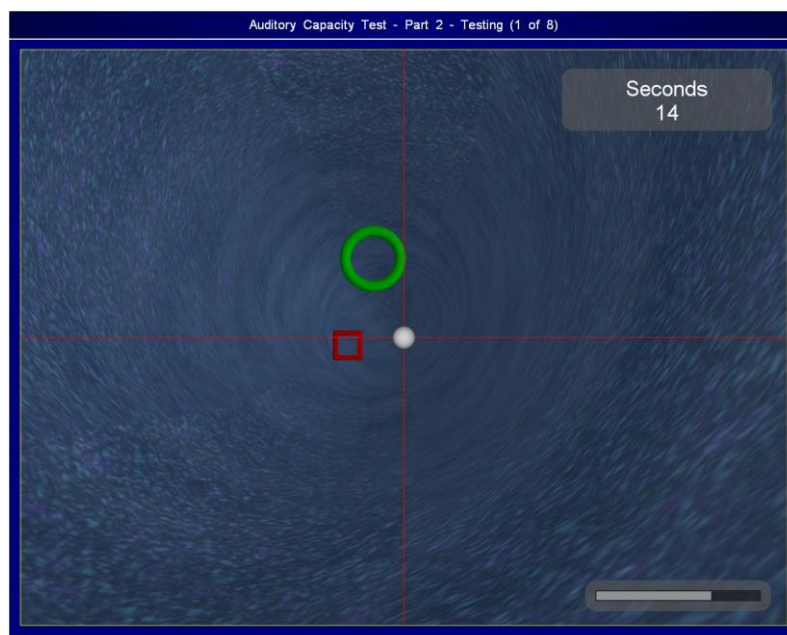


Auditory Capacity Test

This is a short term memory test designed to assess your memory capacity under multiple tasks and timed condition. You will have to:

- a. Deal with more than one task at a time, e.g. change colours and numbers using the keypad provided, control the movement of a ball presented on screen using a joystick and remember a string of figures.
- b. Follow aural instructions given over headphones to remember and recall appropriate actions to take regarding the different tasks.

The total test time including instructions is approximately 23 minutes and you do not need to prepare for this test. An example of the type of screen you will encounter is shown below:

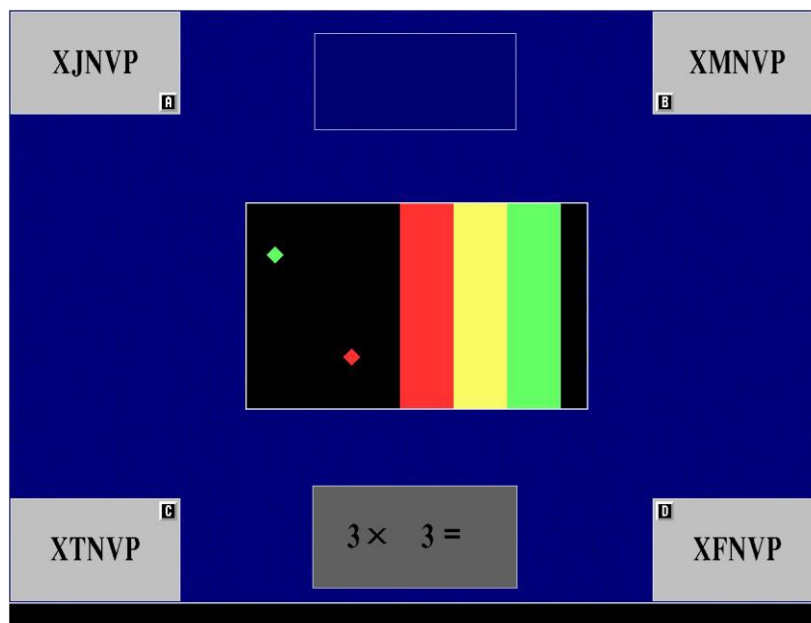


Colours Letters and Numbers Test

This is a multiple tasks test specifically designed to assess your ability to shift attention between different tasks. You will have to:

- Deal with more than one task at a time.
- Monitor changes and pay attention to detail.
- Remember sequences of information.
- Complete simple mental arithmetic.

The total test time including instructions is approximately 20 minutes. You can prepare for this test by practising your mental arithmetic. An example of the type of screen you will encounter is shown below:



Mathematics Reasoning Test

This is a reasoning test designed to assess your ability to solve numerical problems. You will have to interpret written descriptions to solve numerical problems using time/speed/distance calculations. The total test time including instructions is approximately 18 minutes and you can prepare for this test by practicing calculations using the time/speed/distance formula. An example of the type of screen you will encounter is shown below:

The screenshot shows a test interface with a dark blue background. At the top, a black bar contains the text "MATB Mathematics" in white. The main area contains a word problem in white text: "An aircraft flies for 1500 miles in 5 hours. Travelling at the same speed how long will it take the aircraft to travel a further 2500 miles?". Below the question are five multiple-choice options, each in a black box with a white letter and text: "A 7.33 hours", "B 8.33 hours", "C 13.33 hours", "D 15.33 hours", and "E 16.33 hours". At the bottom, a black bar contains the text "Answer:" on the left and "Time Left: 17:55" on the right, both in white.

MATB Mathematics

An aircraft flies for 1500 miles in 5 hours. Travelling at the same speed how long will it take the aircraft to travel a further 2500 miles?

A 7.33 hours

B 8.33 hours

C 13.33 hours

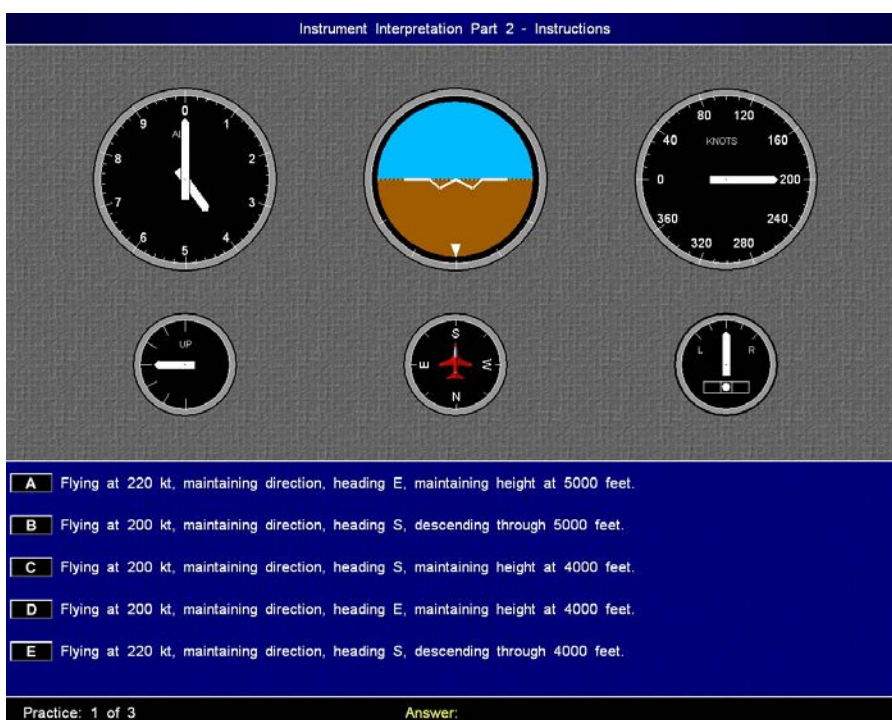
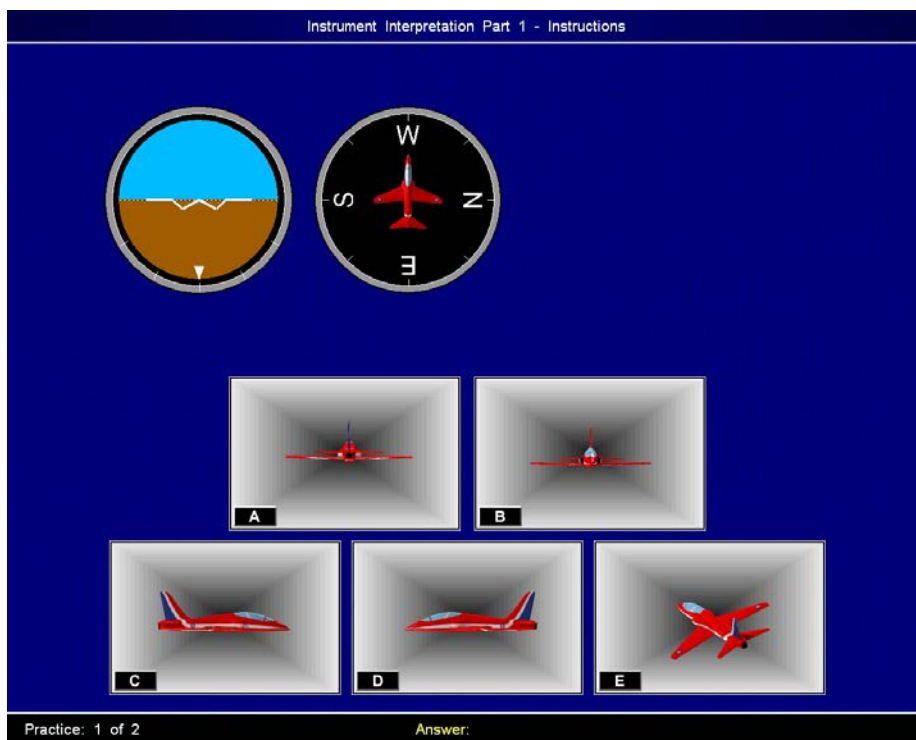
D 15.33 hours

E 16.33 hours

Answer: Time Left: 17:55

Instrument Comprehension Test

This is a spatial test designed to assess your ability to visualise using pictorial, numerical and verbal information. You will have to inspect instrument readings to visualise the orientation of an aircraft. The total test time including instructions is approximately 26 minutes and you do not need to prepare for this test. Examples of the types of screens you will encounter are shown below:



Digit Recognition Test

This is a short term memory test designed to assess your short-term visual memory. You will have to:

- a. Remember strings of digits of varying lengths.
- b. Answer questions about the string of digits shown.

The total test time including instructions is approximately 4 minutes and you do not need to prepare for this test. An example of the type of screen you will encounter is shown below:

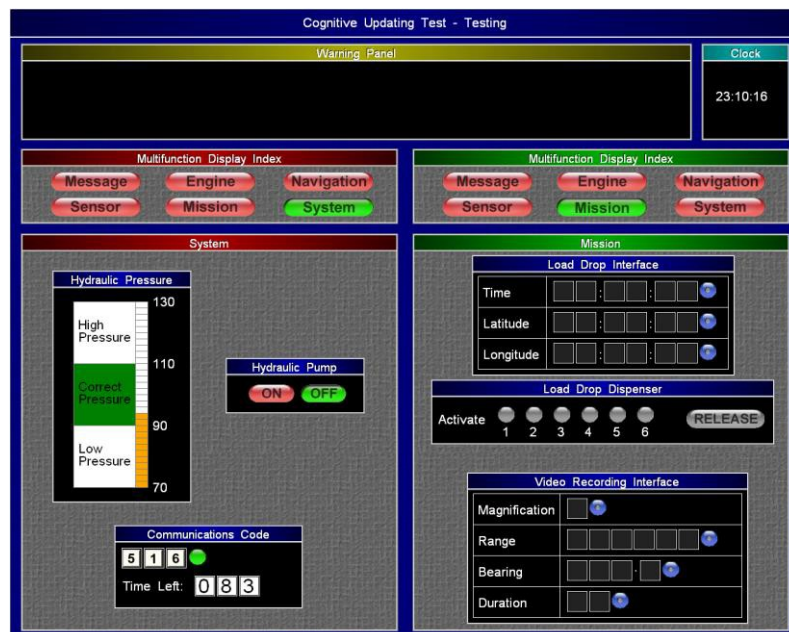


Cognitive Updating Test

This is a multiple tasks test designed to assess your ability to manage and coordinate tasks in a busy working environment. You will have to:

- a. Deal with a series of tasks against the time shown in a digital clock, e.g. monitor, control, set up and adjust a variety of technical systems and update information as required.
- b. Complete these tasks by means of using multifunction displays, interactive pages and a menu system.

The test administration time including instructions is approximately 35 minutes and you do not need to prepare for this test. An example of the type of screen you will encounter is shown on the next page:

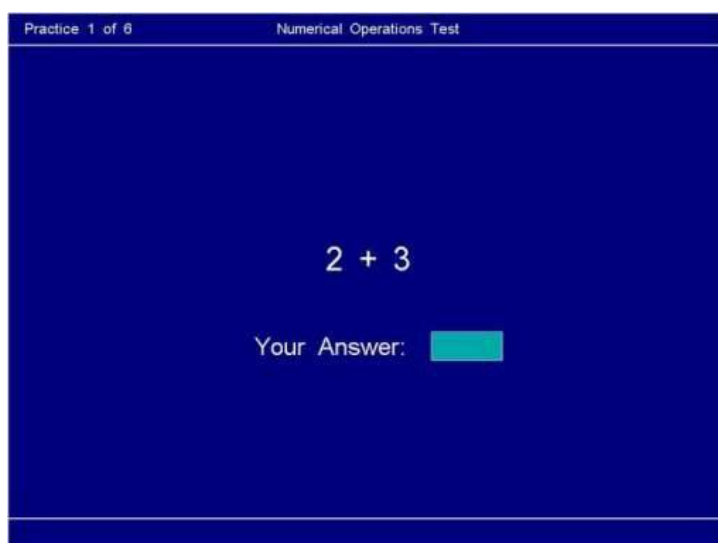


Numerical Operations Test

This is a reasoning test designed to assess your ability to work out mental arithmetic problems. You will have to:

- Do mental calculation using addition, subtraction, multiplication and division.
- Work quickly and accurately.

The total test time including instructions is approximately 2 minutes and you can prepare for this test by practising your mental arithmetic. An example of the type of screen you will encounter is shown below:

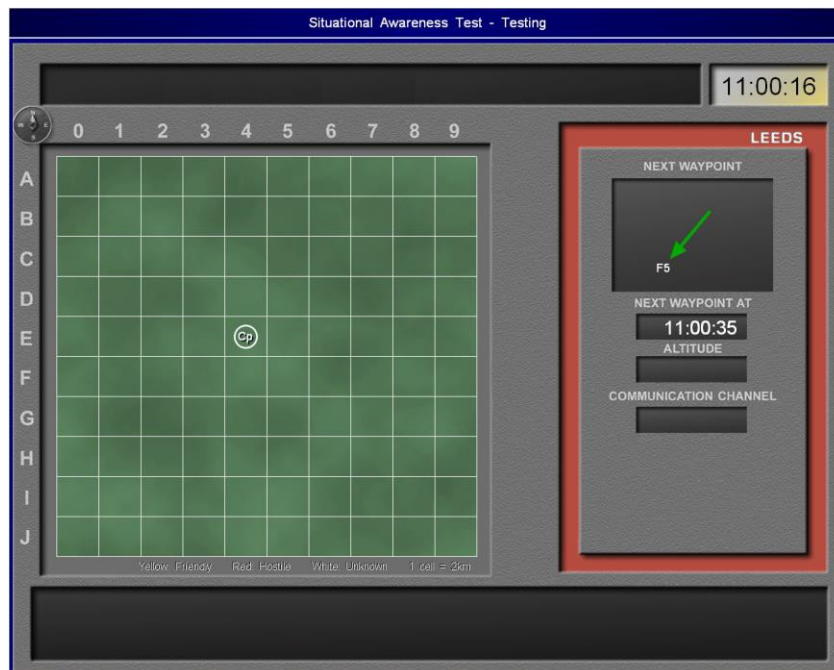


Situational Awareness Test

This is a multiple tasks test designed to assess your ability to collate verbal, numerical, pictorial information to build, maintain and update a mental picture of a complex changing situation to solve problems. You will have to:

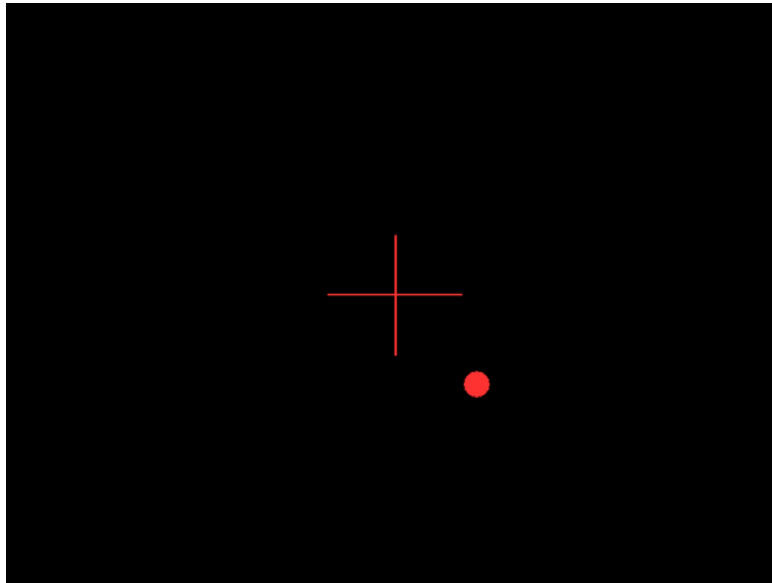
- Monitor verbal, numerical, pictorial and coded information which can be presented to you aurally via a set of headphones or visually on screen.
- Monitor a changing situation to be aware of past, on-going and possible future activities/events that concern the position and movement of a variety of objects.
- Answer queries on the changing situation and what actions you think is appropriate to take to solve various problems.

The total test time including instructions is approximately 30 minutes and you do not need to prepare for this test. An example of the type of screen you will encounter is shown below:



Sensory Motor Apparatus Test

This test is designed to assess your eye-hand-foot coordination. You will have to use a joystick and foot pedal to control the vertical and horizontal motions of a moving circle (i.e. red dot) and keep it as close as possible to the centre of the cross-hair. The total test time including instructions is approximately 9 minutes and you do not need to prepare for this test. An example of the type of screen you will encounter is shown below:



Rapid Tracking Test

This is an eye-hand coordination test designed to assess your ability to track and target objects. You will have to:

- a. Use a joystick to track moving and stationary objects from a location that is moving continuously.
- b. Predict the movement of obscured objects.

The total test time including instructions is approximately 16 minutes and you do not need to prepare for this test. An example of the type of screen you will encounter is shown below:



Spatial Integration Test

This is a spatial test designed to assess your ability to collate information provided by a number of two-dimensional displays to form a 3-D air/ground picture. You will have to:

- a. Interpret and integrate information presented from various 2-D aerial viewpoints about the location and surrounding objects.
- b. Interpret and integrate information presented from various 2-D aerial, horizontal and vertical viewpoints about the location and moving aircraft.

- c. Form a 3-D air/ground picture of the location and surrounding objects/aircraft, as seen from different directions/angles.

The total test time including instructions is approximately 28 minutes and you do not need to prepare for this test. Examples of the types of screens you will encounter are shown below:





System Logic Test

This is a reasoning test designed to assess your ability to solve logical problems related to a system, based on available numerical and verbal information from different sources. You will have to:

- Collate relevant information from different folders available from a menu system to solve a given problem.
- Interpret a variety of information presented in the form of tables, graphs, diagrams, equations and factual statements.

The total test time including instructions is approximately 38 minutes and you can prepare for this test by practising your mental arithmetic. An example of the type of screen you will encounter is shown below:

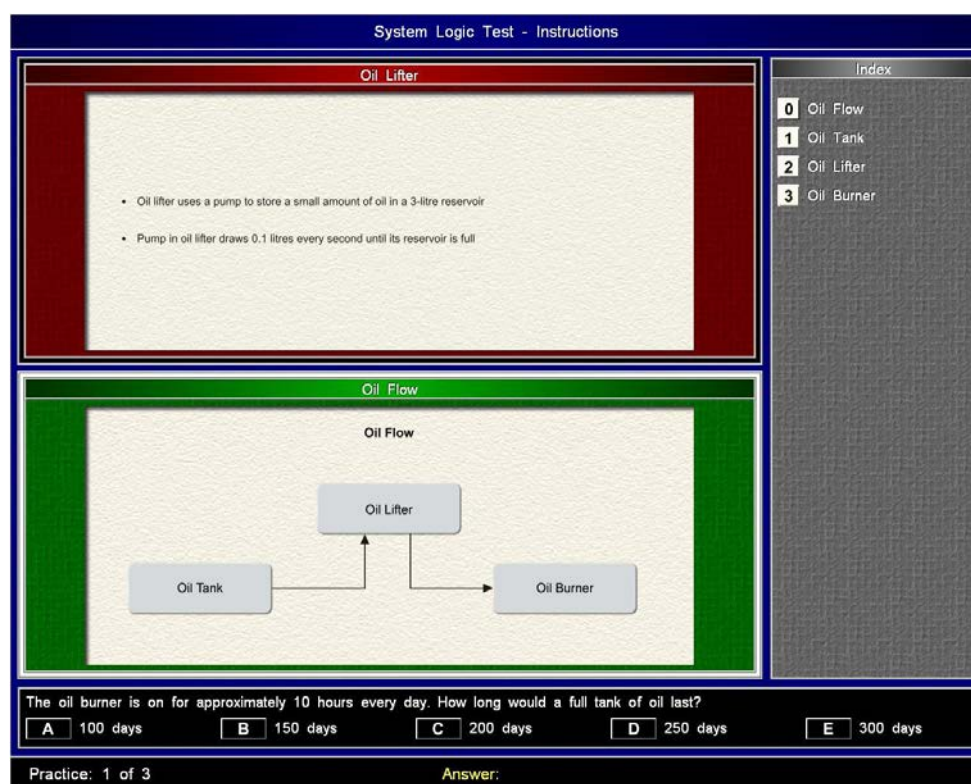


Table Reading Test

This test is designed to assess your work rate in terms of scanning and cross-referencing tables of information. You will have to:

- Cross-reference row and column numbers to identify values in a table.
- Use multiple tables to identify values when given specific values.
- Use and interpret information presented in tables on the monitor and hand-held cards.

The total test time including instructions is approximately 11 minutes and you do not need to prepare for this test. Examples of the types of screens you will encounter are shown below:

MATF Part One - Instructions

First Value	Second Value
+5	-10

A 121
B 119
C 120
D 84
E 82

Practice: 1 of 2 Answer: _____

MATF Part Two - Instructions

What is the
Dri. Cor. ?

Air Speed	Wind Velocity	Wind Angle
100	10	90

A 100
B 3
C 4
D 5
E 6

Practice: 1 of 2 Answer: _____

Target Recognition Test

This is a multiple tasks test designed to assess your ability to search and identify a series of visual targets. You will have to:

- Scan and search for a variety of targets which can be imageries, colour patterns, strings of alphanumeric characters, codes/symbols and warning signs.
- Prioritise and alternate between the various scan/search tasks and register as many targets as you can.

The total test time including instructions is approximately 25 minutes and you do not need to prepare for this test. An example of the type of screen you will encounter is shown below:



Trace Test 1

This is a spatial test designed to assess your ability to orientate in three-dimensional space. You will have to:

- Perceive the changing orientation of a moving aircraft from a different perspective/direction.
- Interpret pictorial information and identify the change in orientation of a given aircraft.

The total test time including instructions is approximately 9 minutes and you do not need to prepare for this test. An example of the type of screen you will encounter is shown below:



Trace Test 2

This test is designed to assess your ability to remember the movement of objects in three-dimensional space. You will have to:

- a. Watch short dynamic scenarios involving the movement of a number of aircraft.
- b. Recall the movement and location of moving aircraft in three-dimensional space.

The total test time including instructions is approximately 9 minutes and you do not need to prepare for this test. Examples of the types of screens you will encounter are shown on the next page:



Vigilance Test

This test is designed to assess your ability to scan information and switch between tasks. You will have to:

- Scan pictorial information presented in a matrix format.
- Switch between routine and priority tasks.
- Work quickly and accurately.

The total test time including instructions is approximately 8 minutes and you do not need to prepare for this test. An example of the type of screen you will encounter is shown below:

Vigilance - Instructions

	1	2	3	4	5	6	7	8	9
1									
2									
3									*
4				*					
5								*	
6			*						*
7					*				
8									
9				*					

Routine Task

Enter Row

Enter Col

Visual Search Test

This test is designed to assess your ability to scan information under time constraints. You will have to:

- Scan information presented as letters or line figures.
- Search for a target among a number of distracters.
- Work quickly and accurately.

The total test time including instructions is approximately 4 minutes and you do not need to prepare for this test. Examples of the types of screens you will encounter are shown on the next page:

Visual Search - Instructions

The screen displays a 3x4 grid of letters on a dark blue background. The letters are red and each is in a white box with a number below it. The letters are: Row 1: A (10), E (11), K (12), R (13); Row 2: B (14), S (15), C (16), H (17); Row 3: G (18), P (19), E (20), G (21). Below the grid is a target box containing the letter R and two question marks (??).

Answer:

VISS

The screen displays a 3x4 grid of symbols on a dark blue background. The symbols are red and each is in a white box with a number below it. The symbols are: Row 1: A triangle with an X inside (10), A cross with a horizontal bar (11), A circle with a cross inside (12), A circle with a cross inside (13); Row 2: A right angle symbol (14), A square with a cross inside (15), A circle with a cross inside (16), A circle with a cross inside (17); Row 3: A right angle symbol (18), A circle with a cross inside (19), A circle with a cross inside (20), A circle with a cross inside (21). Below the grid is a target box containing a right angle symbol and two question marks (??).

AFTER TESTING

Test Results

Upon completing the testing process, you will be debriefed by an Aircrew Selection Centre Officer who will explain your results and how they correspond to the occupations you have selected. Should you not meet the standards for your chosen occupations, you will be required to contact your Canadian Forces Recruiting Centre (CFRC) or Personnel Selection Office, complete further research on alternate occupations, and schedule further processing at the CFRC as required.

Retest Policy

Should you not meet the aptitude test requirements for your occupation choice(s) on your first test administration, you may attempt the tests again after twelve (12) months. You may attempt the CFASC Aircrew testing a maximum of three (3) times.

Competitive Selection

Aircrew selection is an extremely competitive process. Achieving the minimum aptitude test standards for your preferred occupation at CFASC does not guarantee selection for enrolment into the Canadian Forces. Pilot candidates must also meet anthropometric and aircrew medical standards. Upon completion of testing at the CFASC, your scores will be forwarded to a selection board for competition against other candidates applying for the same entry/commissioning programme. CFRC staff shall notify you of your selection status.

Good Luck!!