

Aircraft Technical Knowledge

Microlight Pilot Certificate Examination

Sport
Aviation
Corp Ltd

Question Booklet

Sample Examination

Sport Aviation Corp Ltd

A CAA Certified Part 149 Organisation

www.sportflying.co.nz

Introduction

Time Allowed: Forty minutes
Questions: 15 multiple choice
Pass Standard: 70% (11 correct answers)
Special Instructions: Please do not mark this examination question booklet

This exam contains 15 questions and has a recommended sitting time of 40 minutes. The actual qualifying exam has 25 multiple choice questions and a maximum sitting time of 1 hour

Required Resources:

An AIP New Zealand Volume IV may be referred to at any time during this exam.

Appendices:

There are no Appendices for this examination

Today's Flight:

- ✓ There is no special background information that you need to know for this flight
- ✓ To set the scene for you though, it's shaping up to be a nice day today, and you are going flying with your friend from your private airstrip

Examination Questions

1. During your daily pre-flight inspection of the aircraft, you drain a sample of fuel. How would you identify the presence of water in a sample of avgas?

- A) A layer, or globules floating on top of the avgas sample
- B) A layer, or globules at the bottom of the avgas sample
- C) Fizzing and bubbling as the fuel and water react with oxygen in the air
- D) A slight discolouring of the fuel; a contaminated sample will appear slightly green in colour.

2. Further on into your pre-flight inspection, you notice the static vent is completely blocked up. How will the Altimeter and Airspeed Indicator instruments be affected by this blockage?

- A) Neither the Altimeter or the Airspeed Indicator will work at all
- B) The Altimeter will not work at all; the Airspeed Indicator will work but read incorrectly
- C) The Altimeter will not work at all; the Airspeed Indicator will continue to work correctly
- D) The Airspeed Indicator will not work at all; the Altimeter will work but read incorrectly

3. The ISA Standard Day can be used to determine aircraft performance. How will a temperature of 22°C and QNH of 1006hPa affect performance today?

- A) Performance will be improved
- B) Performance will be decreased
- C) Performance will be unaffected
- D) Performance will be the about the same, as the temperature and air pressure cancel each other's effects out

4. Your airstrip has wet grass. How will this affect your take off and landing ground roll performance?

- A) Take off will be longer, landing will be shorter
- B) Take off will be shorter, landing will be longer
- C) Both take off and landing will be shorter
- D) Both take off and landing will be longer

5. You are bringing your friend along today and do not want to overload your aircraft. What is the maximum fuel that can be carried on this flight?

Empty Weight: 326kg	Maximum Weight: 544kg
Occupants: 80kg & 75kg	Baggage: 15kg
Avgas Fuel: 0.72kg/litre	

- A) 34 litres
- B) 48 litres
- C) 66 litres
- D) 83 litres

6. The baggage compartment is behind the seats, and can lead to the aircraft being loaded aft of its centre of gravity limits. If the aircraft is loaded aft of its rear limit, how will it handle?

- A) The aircraft will tend to pitch up, and the elevator will be more sensitive
- B) The aircraft will tend to pitch up, and the elevator will be less sensitive
- C) The aircraft will tend to pitch down, and the elevator more sensitive
- D) The aircraft will not have any change in pitch tendency and the elevator effectiveness unchanged

7. Immediately after start up, which of the following gauges should be checked to confirm the correct operation and continued reliability of a four-cycle engine?

- A) Oil Temperature Gauge
- B) Oil Pressure Gauge
- C) Cylinder Head Temperature Gauge
- D) Manifold Pressure Gauge

8. The aircraft manufacturer recommends using 20° of wing flaps for take off. How would the take off be affected if you attempted to take off with 10° of flap?

- A) Take off roll will be longer
- B) Take off roll will be shorter by 10%
- C) Take off roll will be shorter by 20%
- D) Take off roll will be the same

9. After taking off from your home airfield you climb away at 60 knots. Your aircraft has a best rate of climb speed of 65 knots. How will your aircraft's climb performance be affected by slower speed?

- A) You will have a higher nose attitude and an improved rate of climb
- B) You will have a higher nose attitude but a reduced rate of climb
- C) You will have a higher nose attitude and the same rate of climb provided you use full power
- D) You will have a lower nose attitude and a reduced rate of climb

10. You are almost ready to level off at 2,500 feet AMSL. What would be the correct procedure for levelling off from a climb?

- A) Lower the nose to cruise attitude and immediately reduce power to avoid exceeding Vne or over speeding the engine
- B) Lower the nose to cruise attitude, allow the aircraft accelerate to cruise speed before setting cruise power and trimming as required
- C) Reduce the throttle and lower the nose, trim once the required nose attitude is established
- D) Trim forward to relieve the weight on elevator, set cruise power once the aircraft has accelerated to cruise speed

11. Once in unaccelerated straight and level flight at 2,500 feet AMSL, how will the primary forces be acting on your aircraft?

- A) Thrust will be greater than drag, and lift greater than weight
- B) Thrust will be equal to drag, and lift equal to weight
- C) Thrust will be equal to drag, and lift greater than weight
- D) Thrust will be greater than drag, and lift equal to weight

12. You accidentally knock the master switch to the OFF position. How will the aircraft's magneto ignition system be affected?

- A) The engine will continue to run normally
- B) The engine will continue to run normally until the battery goes flat
- C) The engine will continue to run until the ignition rotors lose their inertia
- D) The engine will stop immediately

13. You execute a steep turn at 45° angle of bank. During a correctly executed level steep turn, how does the lift produced by the wings change?

- A) Total lift increases, but the vertical component decreases
- B) Total lift increases, but the vertical component stays the same
- C) Total lift stays the same, but the vertical component decreases
- D) Total lift decreases, and the vertical component decreases

14. A consequence of a poorly executed steep turn is to enter a spiral dive. What is the best technique to recover from a spiral dive?

- A) Apply backpressure and more power to raise the nose back to the horizon
- B) Close the throttle, roll out of the turn and ease out of the dive
- C) Reduce the angle of bank and ease out of the dive
- D) Close the throttle, centralise the control column, apply full opposite rudder and then ease the elevator forward.

15. You arrive back at your airstrip where there is a crosswind blowing on the runway. How would you overcome the tendency of the aircraft to weather-cock the nose into the wind?

- A) Apply aileron into the wind, and opposite rudder
- B) Apply rudder into the wind, and opposite aileron
- C) Apply aileron and rudder toward the wind
- D) Apply aileron and rudder away from the wind

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Instructions

Please read the following instructions and sign below before commencing the examination. Time taken completing this page is not included in the allocated time for the examination.

This exam contains 15 questions and has a recommended sitting time of 40 minutes. The actual qualifying exam has 25 multiple choice questions and a maximum sitting time of 1 hour

The maximum allowable time is forty minutes. There is no additional reading time allocated at the start of the examination.

Applicants should answer all fifteen. All questions are 'multiple choice'. Read the question and select the correct answer. Indicate your choice of answer by placing a ✖ in the appropriate box on the next page of this Answer Booklet.

Please use a blue or black ink pen. Do not use pencil, or red or green pen. The required pass standard is 70% which requires you to correctly answer at least 18 questions. Applicants will be notified of their result in writing.

At the end of this examination, please hand this completed Answer Booklet, including all appendices with your Examination Question Booklet to the supervisor. Please do not mark or write on the Examination Question Booklet. Failure to return all these documents will result in your examination grade being withheld. The Examination Question Booklet and Answer Booklet are the property of Sport Aviation Corp Limited, and are protected by copyright.

During this examination, you may not communicate with any other persons except the examination supervisor, copy from another applicant, refer to unauthorised material, or remove any examination material from this room. You may refer to an AIP NZ Volume IV at any time during this examination.

By signing below, you agree to abide by the examination instructions detailed above. It is an offence to breach these instructions under CAR Part 61.19 and sanctions are enforceable for such breaches.

Signature: _____

Date: _____

Answer Sheet

	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Question One	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Two	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Three	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Four	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Five	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Six	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Seven	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Eight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Nine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Ten	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Eleven	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Twelve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Thirteen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Fourteen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Fifteen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Sixteen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Seventeen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Eighteen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Nineteen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Twenty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Twenty-One	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Twenty-Two	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Twenty-Three	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Twenty-Four	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Question Twenty-Five	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Administration Use

Name: _____

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Answers Correct:

Result:
 PASS RESIT