



Pilot Exam Notes for Candidates

The Key Points are as follows:

General:

- The Pilot Exam is the final stage in gaining that rating. The BHPA office processes the exam as part of the process of issuing the Pilot rating. For that reason, candidates should have completed all of the PILOT flying tasks before attempting the PILOT examination. They **MUST** have completed all the PILOT flying tasks before the exam is submitted and the Pilot Rating Application is sent to the BHPA office
- Any Coach or Instructor may act as Invigilator for any examination so long as they have already passed that examination and holds that rating (or one higher)
- No conferring or reference materials are allowed
- Candidates may use a calculator and ruler

There are two versions of the Pilot Exam for Hill Pilots.

(There is a separate exam for Pilots in the Power Environment).

Method A - The paper exam. (At present this is the only version available for Pilots in the Tow Environment)

- There is just a single paper, which must be completed in one sitting. The time allowed for the examination is 1 hour 45 minutes
- The paper is sub-divided into the familiar three sections (Airlaw, Meteorology, Flight Theory). All three sections must be attempted during the 1 hour 45-minute period
- The papers use the multiple-choice format, although a few questions require you to supply the 'missing word'
- All pilots (PG Hill & Tow, HG Hill & Tow) sit the same paper. (The Flight Theory section has a 'free choice' sub-section where pilots answer any five from thirteen questions. This allows areas linked to specific craft type to be explored.)
- Papers are issued by the BHPA office for specific Candidates and returned once completed. When approached by a Candidate the Invigilator should apply to the BHPA office for the examination paper. After checking that the Invigilator is suitably qualified, the BHPA office will issue the paper for the specific Candidate to the Invigilator
- There is a four-month waiting period before the paper may be re-sat
- The pass mark is seventy percent. Failure to achieve the seventy percent minimum in any section will result in total failure of the paper. Marking is on the simple basis of one mark per correct answer.
- When the Candidate has completed the examination, the Invigilator should ensure that all the details are correctly completed before sending it to the BHPA office with the completed 'Application for Pilot Rating' form from the Pilot Task Book and the exam / registration fee.
- The BHPA office will mark the paper;
 - a: if successful, and the application form and fee are in order, the Pilot rating will be issued.
 - b: if unsuccessful, the Candidate will be notified of the percentage scored in each paper, and the application form returned

Method B - The online exam

- There are five shorter exam papers, they may be completed in more than one sitting. The number of questions varies from paper to paper but typically 2 minutes per question is allowed. If the Candidate has a specific reason for requiring an extension of this time (e.g. a second language), the Invigilator may allow this at their discretion
- The candidate must have a suitable device and an internet connection, note that if the connection is dropped the exam is autosaved and can be recommenced at any time
- The exam papers consist of 5 subjects, Meteorology, Airlaw, Principles of Flight, Human Factors and Airmanship, and Navigation. Four of the papers are the same for all Hill Pilots whether Hang Gliding or Paragliding. One paper: Principles of Flight, has two versions, one is for Paragliding and the other for Hang Gliding. Candidates should select the version appropriate to their chosen discipline. (You do not need to complete both versions unless you happen to be applying for a Pilot rating in both disciplines)
- When approached by the Candidate, the Invigilator should request log-in details for the Candidate. The office will require their BHPA number and full name, and payment of the appropriate fee
- Whilst not mandatory, it is often practical to take the 5 papers in two or more sittings
- The office will supply the log-in information to the Invigilator allowing them to log-in on behalf of the Candidate to the Classmarker website; and access the exam papers
- The exam is marked automatically, and the candidate informed of any questions they did not answer correctly, including what the correct answers are. The Invigilator may wish to take this opportunity to discuss any incorrect answers with the candidate
- The pass mark is 75% on each paper
- If a Candidate does not achieve the required pass mark, they can apply to take any alternative papers required no sooner than 7 days after the original exam has been taken
- The process for re-takes is the same as for the initial papers and the appropriate fee is payable when the log in information is requested from the office. (Only one retake fee is payable, even if more than one paper is required)

The Pilot Exam Syllabus

Any keen pilot who devotes a few evenings' study to the matter should have no problems with this exam. Most of the required information is contained in the most recent edition of the Pilot Handbook, although close study of an up-to-date aeronautical chart (especially the legend) is essential. The CAA publication "The Skyway Code" is also useful. Background reading is always advisable, and attendance at club lecture evenings is strongly recommended. It is strongly recommended that candidates:

1. Try out the mock exam paper available on the BHPA website to ensure they have a suitable standard of knowledge

<https://www.classmarker.com/online-test/start/user-info/?quiz=vay5e8f452639420>

2. Read and digest the "Human Factors and Airmanship" document (I AM SAFE) on the BHPA website

https://documents.bhpa.co.uk/index.php?doc=Pilot_lamsafe.pdf

Once you have completed all the flying tasks for the Pilot rating, you will need to arrange a time and place to sit the exam with your Club's Coaching Officer, a Coach who has already passed the exam, or a qualified Instructor. Clubs often arrange sessions where several Candidates can sit their exams at once

Air Law and Navigation

You should:

- be able to name the sources and promulgation methods of UK Aviation Law
- understand the NOTAM and CANP systems
- be able to interpret aeronautical charts (including scales, differences in the level of information depicted, validity periods, and symbols)
- understand the basic structure of Zones, Areas and Airways
- know the dimensions of ATZs and MATZs
- understand the usage of various altimeter settings (QFE, QNH, 1013.2 hPa)
- know the Rules of the Air (especially the low-flying rules, and the aerial collision avoidance rules)
- be able to define VMC and VFR (minima, rules)
- know the legal definitions of night, sunset and sunrise and the relevant flying restrictions relating to them
- be able to define IMC and IFR (basic differences from VMC rules)
- appreciate the factors affecting compasses (deviation and variation)
- be able to interpret warning signs
- understand commonly used abbreviations and initials
- be able to distinguish between types of airspace that permit glider entry and those that don't (e.g. AIAAs, MATZs, Danger Areas)

Meteorology

You should:

- understand the relationship between wind direction and areas of high and low pressure
- be able to describe in detail a cold front and a warm front (typical clouds, conditions, pressure changes, wind changes)
- be able to identify some common high, medium and low cloud types, and give their approximate heights
- fully understand convection (the birth and development of a thermal, through to plotting the progress of a thermal given the ELR and initial temperature)
- understand, and be able to define and use, meteorological terms such as stability, instability, veer, back, ELR, DALR, SALR, tephigram, anabatic, katabatic
- be able to describe the usual conditions associated with high - and low-pressure weather systems
- understand the causes of: valley winds throughout the day, sea breezes and sea-breeze fronts, wave lift, fog (of various types)
- fully understand and be able to interpret a pressure chart - to the extent of being able to describe the current weather at selected locations, and to forecast likely changes
- have a knowledge of common cloud types and what they signify

Flight Theory / Principles of Flight

You should:

- be able to explain in detail how a wing creates lift, including the relevance of venturi tubes and Bernoulli's theorem
- be able to define and use terms such as chord line, angle of attack, aspect ratio, centre of pressure, washout
- be able to describe the aerodynamics of the stall
- be able to simply describe factors affecting stability in pitch, roll and yaw
- understand the relationship between glide ratio and l/d ratio
- understand the effect of ballast
- be able to name the forces on a glider in steady flight and explain their relationship
- be able to name the various types of drag and explain their causes

- be able to describe the relationship between the induced, parasitic and total drag and airspeed using drag curves
- understand and be able to use a polar curve
- understand the basic working principles of altimeters and variometers
- understand terms such as total energy and airmass in connection with variometers

Human Factors & Airmanship

You should:

- know the General Aviation self-check mnemonic I AM SAFE
- understand the principal hazards that free-flight pilots face, and the common reasons for poor decision making
- know the legal position regarding alcohol and drugs for pilots
- know the BHPA pre-flight check system
- appreciate the importance of appropriate confidence levels, goal setting and assessing risk
- know about the effects of the environmental challenges of the sport: Dehydration, Cold, Heat, Hypoxia, Flying at Altitude

Flight Theory / Principles of Flight: Power

In addition to the subjects above, candidates taking the examination for the Power environment will also need to know:

- how a propellor functions, and the effects of torque
- basic function of a 2 stroke engine
- fuel and fuel systems
- environmental factors affecting aircraft performance
- effects of throttle settings
- definition of an SPHG