



## HANG GLIDING FEDERATION OF AUSTRALIA

# ADVANCED EXAMINATION STUDY PAPER - PARAGLIDING

This study guide is provided to enable pilots to prepare for the multiple choice Advanced Paragliding Pilot Certificate theory examination. The theory examination must be passed prior to the issue of an HGFA Advanced Paragliding Pilot Certificate. The multiple choice examination is in two parts, to achieve a pass an applicant must correctly answer all Part A questions (1 to 20) and correctly answer 75% of Part B questions (20 to 80). Failure in either part will require entire re-examination.

A student must be able to answer the questions and understand the subjects listed below.

### **PART A** Required Pass 100%

Select the correct VMC criteria below 10,000' amsl.

Other than during the launch and landing phase, what is the minimum height a glider may be flown over any city, town or populous area?

What is the minimum distance a glider may be flown from spectators?

What glider gives way:

- when two gliders are approaching at different heights?;
- when two gliders are converging at right angles?;
- when joining a thermal?;
- when overtaking another?;
- when two gliders are approaching head-on along a ridge?
- when two gliders are approaching head-on in clear air?

What technique is used to recover from a left hand wing tip tuck?

What is the recovery technique from a stall whilst in a turn?

How do you recover from a full stall?

What is the rule in regard to absolute right of way?

What are the legal requirements as to when and where a paraglider may be flown?

When may a person act as pilot-in-command of a paraglider?

What are the priorities of First Aid?

What are the pilot responsibilities for collision avoidance?

Which hang gliding/ paragliding rule of the air differs from those of sailplanes?

What is the HGFA recommended maximum time between emergency parachute repacks?

What problems may be encountered when hang gliders and paragliders are flying together?

### **PART B** Required Pass 75%

Define Aspect ratio.

Define Parasitic drag.

Define High speed stall.

What problems are associated with a large tip tuck on a high performance glider?

How does the density of moist air vary from dry air.

What height limits apply to paragliders in controlled air space?

Define Indicated airspeed. Define True airspeed.

After a collapse you have a cravat which is causing you to go into a spiral dive, what are your options?

What should you do if you are about to entangle with another paraglider?

How do you recover from a parachutal stall?

What are the symptoms of a parachutal stall?

What relationship do weight, drag, lift, angle of attack and relative airflow have to a wing in flight?

What action would you take you stall a wing tip whilst thermalling in a tight turn?

What action would you take if you are thermalling with deep brake settings in light lift, you get hit by a stronger thermal and the glider stalls?

How would rain on the glider affect handling and performance?

When landing in strong turbulent conditions, which technique could be used to aid in a safe landing?

How does wing loading affect stall speed?

What do you do to increase the chances of seeing and being seen if you hear a powered aircraft when flying at 5000'?

What is the possible significance of alto-cumulus clouds early in the day?

What is the difference between over-development (OD) and over-clouding (OC) and how might they affect soaring strategies?

Can you identify the following cloud types: Cb, Sc, Cu, St & Ns?

What techniques are used to utilise wave lift and what are the associated dangers?

What is a dust devil (willy willy) and what causes it to form? Why are they more likely to form in dry conditions? At what height should you enter one (if at all)?

Under total cloud cover what cloud formations and types may hold hope of convective lift?

A large high pressure system is centred over NSW/VIC border. The isobars show a fairly uniform shape except a dip toward the south along a line from central west Qld to central NSW. What does this dip indicate and what are the likely developments the next day along the eastern seaboard, the great divide, the central west of NSW and Qld, Nth Vic and other places west of the "dip"?

What is the nature of thermal lift early in the day (average Aust. conditions)?

What is trigger temperature?

Rate the following in order from stable to unstable:

- dry/cold air mass; warm/dry air mass; warm/moist air mass; and cold/moist air mass.

What air causes the most severe mechanical turbulence?

Define the term 'dry adiabatic lapse rate'.

On a mean sea level synoptic chart of Australia showing a typical synoptic situation for a given season, identify the point(s) of the following features:

- high pressure systems
- low pressure systems;
- warm and cold fronts;
- an isobar of 1016 Hpa;
- a tropical revolving storm;
- a trough;
- wind directions around highs and lows.

On an ERC:

how can you differentiate controlled airspace from uncontrolled airspace?;

what does an area labelled "LL FL120" indicate?;

on an ERC what does "CTR 0-3000" indicate?

what would you need to do if you wished to fly from a site "R592B 0-10000"?

What radio procedure you would use to report your position to a pick up car following you.

What is the maximum height a glider may be flown in class 'G' airspace?

How would you increase your chances of being found if you landed in tiger country or were injured out landing?

What are hypoxia and hypothermia and how would you recognise the symptoms?

How long do the residual effects of alcohol affect your flying ability?

How long do the residual effects of marijuana affect your flying ability?

How does alcohol effect your performance and judgement?

How does marijuana effect your performance and judgement?

What are the dangers of flying in severe turbulence?

What is the standard approach pattern for unobstructed LZ's for gliders?

What is the accepted standard approach and landing pattern for paragliders at general aviation aerodromes where paragliding operations are permitted?

You are circling in a thermal in moderate wind. If you lost the thermal, where would you search for it?

When a stall is induced what section of the wing collapses first?

What is the standard navigational maps used by paragliders in Australia?

How would you gain a map reference from a Natmap?

What is important when flying cross country?