



## Powered Paragliding Licence Written Examination

**Applicant's Name:** .....

**Telephone Number:** .....

**Address:** .....

**Date Written:** .....

**Marked By:** .....

**Date Marked:** .....

**Score:** ..... /150 = .....%

**Pass/Fail:** .....

**Instructor Remarks:** .....

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**Question 1: (PTE) (10)**

Explain what you understand about the **Propeller Torque Effect**, including its **causes** and **effects** and, how it **affects PPG flight**. What aspects influence the **extent** of the effect, and **steps to be taken** to minimise the consequences.

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**Question 2: (GP) (10)**

Describe the **Gyroscopic** Aspects, with particular emphasis on **Gyroscopic Precession**. What it is, what **causes** it and how it **affects PPG flight** and the resulting **dangers** thereof. Detail some **examples**, including resulting action and powered paraglider **behavior**.

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**Question 3: (ABT) (15)**

Describe the **three causes** of **Asymmetric Blade Thrust** and its **effect**. What **factors** influence the extent of the problem and how can it be reduced.

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**Question 4: (Attachments) (5)**

Explain why powered paragliders usually have higher **Attachment Points** (riser attachments) than free-flight harnesses. Describe the various **methods of attachments** and the **advantages- and disadvantages-** of each.

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**Question 5: (running-in) (10)**

Discuss **running-in** of new engines, the **purpose** thereof, **procedures** and **precautions**. Cover aspects of **carb tuning**, ratio of **oil** mixtures, **vibration** problems, **loosening** fittings, etc

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**Question 6: (Fuel /oil) (5)**

Comment on **Fuel Mixtures** with specific reference to **oil types** (i.e. Synthetic vs Mineral oils), mixture **ratio's** and **running-in** considerations.

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**Question 7: (Heat Seizure) (15)**

Discuss **heat-seizure** of engines, **causes** thereof, assessing **extent of damage**, resulting **repairs** required, and **preventative** action.

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**Question 8: (SC Rule) (3)**

**Briefly** describe the concept of the **Semi-Circular Separation Rule**, as pertaining to air-traffic separation. (no need to reproduce the actual table here)

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**Question 9: (Line Rule) (2)**

Explain the principles and application of the **Following Line Rule**.

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**Question 10: (Abbr.) (16)**

What do the following **abbreviations** stand for, and give a brief description of each:

1. VMC
  2. VFR
  3. QNE
  4. AGL
  5. FL
  6. UTC
  7. CTR
  8. FAR
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**Question 11: (Radio broadcasts) (2)**

How often do you need to make general radio announcements while in flight?

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**Question 12: (Radio broadcasts-a) (6)**

Write an example of a general radio broadcast announcement for your area.

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<b>Question 13: (motor inspections)</b>	<b>(4)</b>
When should you inspect your motor for potential problems (nuts, bolts, rubbers, belt, etc) ?	
<b>Question 14: (kill switch)</b>	<b>(3)</b>
If you are about to land and discover that your engine kill-switch is not functional, what would you do and how would you kill the engine?	
<b>Question 15: (Speed Bar)</b>	<b>(2)</b>
Why is it important to have your speed-bar fitted?	
<b>Question 16: (Trim-tabs)</b>	<b>(2)</b>
What are the benefits and usages of having trimtabs on a powered wing?	
<b>Question 17: (formation flying-a)</b>	<b>(2)</b>
If you are flying with a friend, what must you beware of?	
<b>Question 18: (Formation Flying-b)</b>	<b>(2)</b>
If you are flying alongside a buddy and you accidentally bump wingtips, what is the correct course of action for both pilots?	
<b>Question 19: (over water)</b>	<b>(2)</b>
If you are flying near the coast (or lake or dam), what is a safe distance and height to go out over the water?	
<b>Question 20: (Log book)</b>	<b>(1)</b>
Why would you log your flying hours?	
a) to record progress	
b) for licensing and renewal purposes	
c) proof of experience and licenses received	
d) to keep track of engine hours for servicing intervals	
e) all of the above.	
<b>Question 21: (safety altitude)</b>	<b>(1)</b>
If you double your flying height above the ground, by what factor is the landing area you can reach by gliding increased? (in the event of an engine-out)	
a) Double	
b) Triple	
c) Four times	
d) 50%	
<b>Question 22: (Clouds)</b>	<b>(4)</b>
How far do you need to remain away from clouds? Vertically and horizontally	
<b>Question 23: (sunset flying)</b>	<b>(1)</b>
When flying around sunset, what is the latest you may remain in the air?	
<b>Question 24: (Tandem flying)</b>	<b>(3)</b>
What do you need before you may take a passenger for a tandem flight on your paramotor? (in terms of licensing and equipment)	
<b>Question 25: A lighter all-up take-off weight will increase:</b>	<b>(1)</b>
a) Climb rate.	
b) Take-off distance.	
c) Power off stall speed	
d) Power on stall speed	
<b>Question 26:</b>	<b>(1)</b>
A heavier all-up take-off weight will increase:	
a) overall airspeed	
b) stall speed	
c) take-off run internal cell pressure	
d) all of the above	

**Question 27:** (1)  
The \_\_\_\_\_ is an imaginary straight line drawn through an airfoil (wing) from the leading edge to the trailing edge.  
a) angle of attack.  
b) camber line  
c) chord line  
d) relative wind line

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**Question 28:** (1)  
Angle of attack is defined as:  
a) The angle between the horizon and the chord line  
b) The angle between the horizon and the relative wind  
c) The angle between the wing chord line and the vertical tail  
d) The angle between the wing chord line and the relative wind

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**Question 29:** (1)  
A stall occurs when:  
a) The critical angle of attack is exceeded.  
b) The nose is too high above the horizon.  
c) The airspeed gets too low.  
d) The engine quits at a bad time.

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**Question 30:** (1)  
Trimspeed is defined as:  
a) flying off the brakes, off speedbar, and trimtabs set to neutral  
b) flying off the brakes, on maximum speedbar  
c) flying at 50% throttle setting  
d) flying as slowly as possible

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**Question 31:** (1)  
In heavy turbulence it is safest to minimise deflections by flying:  
a) Downwind.  
b) At as high a speed as possible.  
c) At a very slow speed  
d) At Trimspeed

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**Question 32:** (1)  
You are on a head-on collision course with another aircraft in open areas. You should avoid the other aircraft by:  
a) Turning to the right  
b) turning to the left  
c) climbing  
d) diving

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**Question 33:** (1)  
You are flying north in straight and level flight with a True Airspeed of 38km/h. The wind at your altitude is from 180 degrees at 10 km/h. What is your groundspeed?  
a) 38 mph  
b) 48 mph  
c) 28 mph  
d) 10 mph

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**Question 34:** (1)  
A magnetic compass is accurate:  
a) With the powered paraglider in any attitude  
b) Only when the airplane operated below manoeuvring speed  
c) At all times  
d) Only when the airplane is operated in straight and level flight at constant speed

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- Question 35:** (1)  
You would most likely find turbulent flying in conditions near:  
a) Stratus clouds  
b) Fog  
c) Cirrus clouds  
d) Cumulus clouds
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- Question 36:** (1)  
You would likely find turbulence  
a) near mountains  
b) in the mid afternoon  
c) deep inland  
d) downwind of buildings  
e) all of the above
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- Question 37:** (1)  
Why does SAHPA exist?  
a) to keep the sport self regulating  
b) to provide 3rd party aviation insurance  
c) to provide a safety orientated licensing system  
d) to provide international recognition to the sport  
e) all of the above
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- Question 38:** (1)  
What is the very last safety action to perform prior to starting an engine?  
a) check the fuel/oil ratio on the fuel.  
b) check for sufficient fuel quantity.  
c) do a pre-flight inspection.  
d) yell "Clear prop" and verify that the prop area is clear of personnel.
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- Question 39:** (1)  
Considering density altitude, your motor and wing would perform better on  
a) warm humid days.  
b) cold humid days.  
c) warm dry days.  
d) cold dry days.
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- Question 40:** (1)  
When may you enter a Restricted Area (FAR)?  
a) Never!  
b) After receiving permission from the appropriate authority.  
c) Whenever you wish with extreme caution  
d) Only on weekends when the areas are closed.
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- Question 41:** (1)  
When may you enter a Prohibited Area (FAP)?  
a) Never!  
b) Only with a written waiver from the CAA Administrator or his designee.  
c) With verbal permission from the controlling agency  
d) Anytime after official sunset and before official sunrise
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- Question 42:** (1)  
What frequency is used for emergency communications  
a) 126.7 Mhz  
b) 124.8 Mhz  
c) 130.35 Mhz  
d) 121.5 Mhz
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- Question 43:** (1)  
Take off run distance is increased by:  
a) Lighter headwind  
b) Higher Altitude  
c) Higher Humidity  
d) Lower QNH  
e) All of the above
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**Question 44:** (1)  
Carb mixture adjustment should be  
a) richened for lower altitudes  
B) richened for higher QNH  
c) richened for lower humidity  
b) All of the above

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**Question 45:** (1)  
Which of the following is true:  
a) below 1500 foot AGL, the altimeter subscale is set to local QNH  
b) below 1500 foot AGL, radio your altitude in Feet.  
c) above transition altitude, the altimeter subscale is set to QNE  
d) When the altimeter subscale has been changed to QNE, radio your altitude in "Flight Level"  
e) All of the above

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**Question 46:** (1)  
Which one is true:  
Rate of climb is  
A) affected by your throttle setting, unaffected by the windspeed and direction  
B) increased in a headwind, reduced in a tailwind

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**Question 47:** (1)  
Angle of climb is  
a) increased in a headwind  
b) increased with added power  
c) reduced at faster airspeed trim  
d) reduced in turns  
e) all of the above

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**Question 48:** (1)  
When Taking off in thermic conditions, you are 10 meters up when you fly into a thermal. The glider Pitches back, your reaction is.  
a) Stay on full power and increase break pressure  
b) Come to Idle power immediately and pump the breaks  
c) maintain 3/4 power and catch the pendulum as the glider surges forward  
d) do nothing  
e) Scream

Total Marks (150)

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