

Paragliding

BASIC LICENCE THEORY TEST

Pilot's Name (Capitals):.....
School:.....
Examiner's Name:.....
Instructor's Licence No:.....
Date written:.....
Date marked:.....

Marks

A	B	C	D	E			
.....	+	+	+	+	= / 184 =%
23	49	34	67	9			

Passmark = 85% (155)

Notes

*Read the questions carefully.
Give answers on your own paper.
Write legibly.
Draw sketches where required (distinguish between describe and/or illustrate).
Where sketches are provided, write answers on them.*

SECTION A: GENERAL

- A. 1 Why use a logbook? (3)
- A. 2 a) What is a reportable accident/incident? (1)
 b) Why should accidents and incidents be reported? (1)
- A. 3 Which paragliding official in the local Club should be notified and the report be given to after an accident or incident? (1)
- A.4 State the procedures for
 - a) Flying at a Club or other established site, for the first time, but also any other time. (3)
 - b) Attempting to establish a new site, which has not been flown before. (4)
- A. 5 How does the sign-off system operate? (2)
- A. 6 Why are square parachutes (sky diving canopies) dangerous to use for paragliding? (3)
- A. 7 Why does the South African Hang Gliding & Paragliding Association (SAHPA) exist, and what are the advantages of being a member of SAHPA? (5)

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SECTION B: AIRFLOW

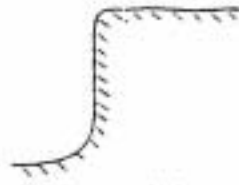
- B. 8 Indicate a 30 Kph wind blowing over the profiles in the illustrations on page 3. (5)
- B. 9 a) Indicate a 30 Kph wind blowing over the contour map on page 3, and shade area(s) of possible penetration difficulties. (3)
 b) Indicate a 30 Kph wind blowing over the contour map on page 3. (1)
- B. 10 Shade in the lift band on the attached diagram. (1)
- B. 11 How can you judge if the wind is turbulent BEFORE take-off? (3)
- B. 12 State five visual references, which could be used to assess wind SPEED, and DIRECTION. (5)
- B. 13 Describe and illustrate wind gradient. (3)
- B. 14 Describe and illustrate the effects of wind gradient on a paraglider while soaring above (Higher than) the ridge. (Not to confused with venturi effect.) (3)
- B. 15 In the above case, what safety precautions should one take? (4)
- B. 16 What is a wind shadow, and where will you expect to find it? (2)
- B. 17 a) What would the effect of wind shadow be on a paraglider (what would it feel like), and why? (2)
 b) What should the pilot do when flying into wind shadow? (2)
 c) What should the pilot not do, and why not? (2)
- B. 18 What dangers are associated with flying in severe turbulence? (2)
- B. 19 What must the pilot do when flying in turbulence? (2)
- B. 20 What are the correct actions when
 - a) Turbulence causes an A-symmetric tuck, and what are the associated dangers? (4)
 - b) A front tuck occurs while the speed bar is used or front risers are pulled? (2)
 - c) A full stall occurs due to deep brakes and/or turbulence: how should the recovery be affected, and what should be avoided? (3)

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B.8



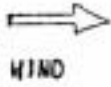
(a)



(b)



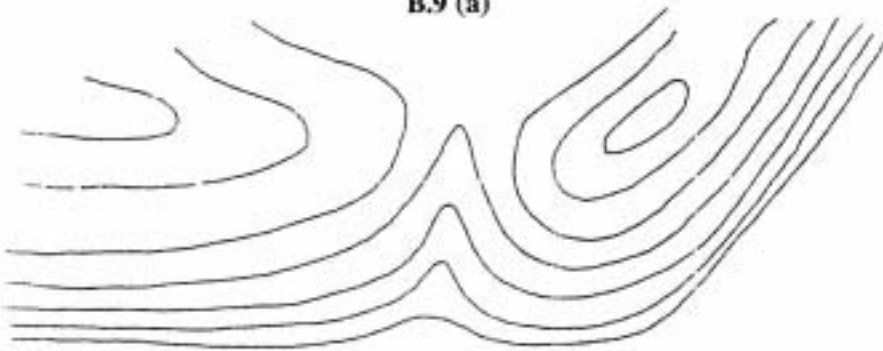
(c)



(d)



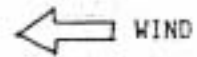
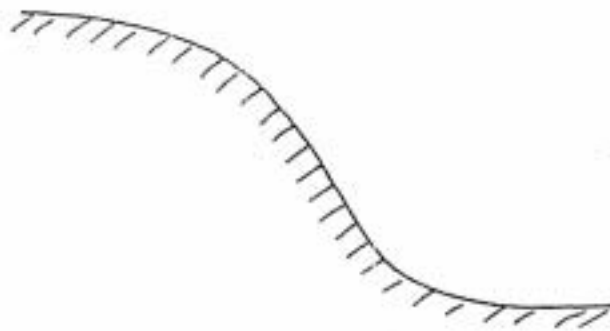
B.9 (a)



B.9 (b)



B.10



SECTION C:

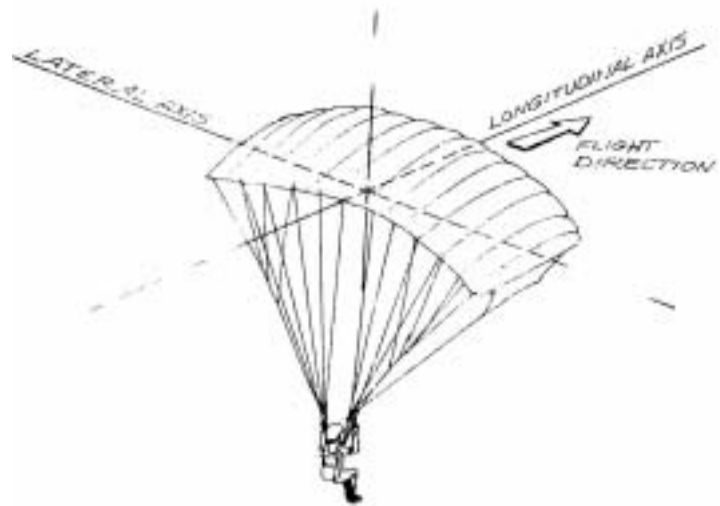
AERODYNAMICS

- C. 21 On the cross section of the paraglider show:
 - a) Gravity
 - b) Drag
 - c) Lift
 - d) Relative Airflow
 - e) Chord (line)
 - f) Angle of attack



- C. 22 What causes a paraglider to move forward in flight? (6) (2)
- C. 23 a) the design of a paraglider is an aerofoil, but it is soft and formless on the ground. How is the shape formed, and maintained during flight? (2)
b) Under what circumstances can the soft wing aerofoil collapse? (2)
- C. 24 What happens when the brake (toggle/steering) lines of the paraglider are progressively pulled down during a flight? (3)
- C. 25 a) What happens when the front risers are pushed or pulled or the speed bar used, on take-off or during flight? (2)
b) What is a possible danger during the above? (1)
- C. 26 What is?
 - a) Glide ratio (1)
 - b) Sink rate (1)
 - c) Wing loading (1)
- C. 27 What are the effects of?
 - a) A light wing loading (below manufacturer's specification)? (2)
 - b) A heavy wing loading (above manufacturer's specification)? (2)

- C. 28 Illustrate (using the diagram):
 - a) Yaw
 - b) Pitch
 - c) Roll (3)



- C. 29 What is ground speed when flying at 20 Kph airspeed in:
 - a) A 10 Kph headwind (1)
 - b) A 20 Kph tailwind (1)
 - c) A 30 Kph headwind (1)
- C. 30 When is the stall utilized to it's maximum?(1)
- C. 31 Which two features contribute to stability in any paraglider? (2)

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SECTION D:

FLIGHT & CONTROL

- D. 32 a) Which four PRINCIPLES to check airworthiness must be followed during the daily equipment inspection? (In each of the four cases, summarise what you would check for / why.) (8)
b) When should the daily inspection be done? (2)
c) When should a paraglider be inspected by the manufacturer or distributor? (2)

- D. 33** a) What are the pre-flight or pre-launch checks (*before* pulling up for take-off), also known as 5 point check? (16)
b) What should the take-off/launch checks DURING a forward pull up be? (3)
- D. 34** Why is take-off and landing executed into wind? (1)
- D. 35** What should a pilot check for when visiting a new landing area before flying? (5)
- D. 36** Arriving on site in strong wind conditions, what factors would determine whether you would be able to have a safe flight? (4)
- D. 37** Why is it more dangerous to fly a high performance paraglider than an intermediate paraglider? (3)
- D. 38** a) What is the sequence of events when 80% brakes are suddenly applied, and immediately released again to zero position? (4)
b) Why can this be dangerous? (2)
- D. 39** In helping another pilot during the actual launch period, what are the duties of a helper? (3)
- D. 40** a) What does "PLF" stand for? (1)
b) When is a "PLF" necessary? (2)
- D. 41** a) When should one deploy a reserve parachute? (3)
b) How should one deploy a reserve parachute?
(5)
- D. 42** What are the correct procedures to follow when one sees a paragliding accident occurring? (3)

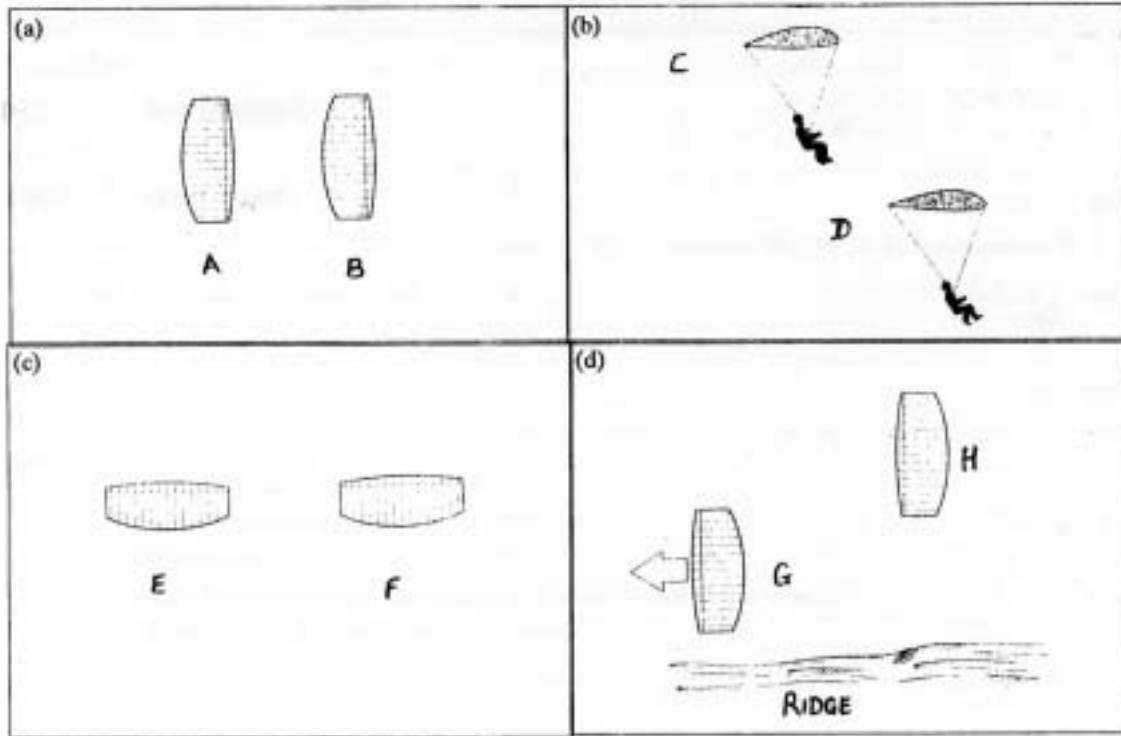
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SECTION E: **AIRLAW**

- E. 43** What is the basic rule for determining who has right of way in the air? (1)

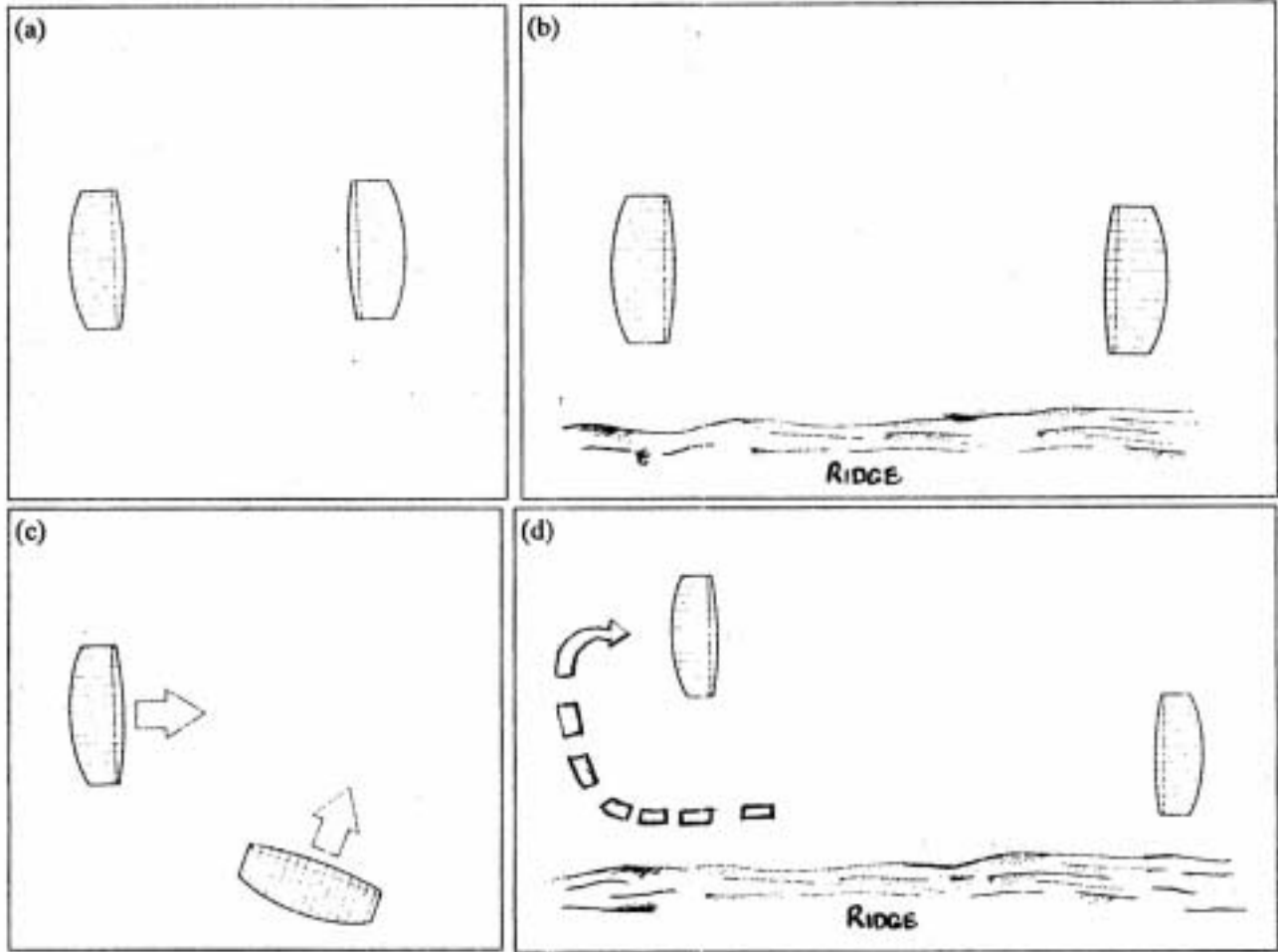
E. 44 In the sketches below, which paraglider has right of way?

(4)



E. 45 In each case of the situation below use arrows to indicate any action to be taken by any of the paragliders.

(4)



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