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Sample Examination

Glider Pilot Licence

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Other related TC Publications:

TP 876E Study & Reference Guide, Glider Pilot Licence, 2002

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FOREWORD

This sample examination has been developed by Transport Canada to assist candidates in preparing for the Glider Pilot Licence written examination.

The questions contained in the sample paper are selected to indicate the form and type of questions that may be encountered.

The Glider Pilot licensing examination consisting of 50 questions is set out in much the same proportion and order as in this sample paper.

Candidates are referred to the Study and Reference Guide for *Glider Pilot Examination* (TP 876E) which specifies the subject areas from which questions may be set.

SAMPLE EXAMINATION

1. When two aircraft are approaching head-on or approximately so and there is danger of collision, each shall
 - (1) alter heading to the right.
 - (2) alter heading to the left.
 - (3) avoid the other by changing altitude.
 - (4) turn on the anti-collision light.

2. When two aircraft are on converging headings at approximately the same altitude, the aircraft that has the other on its right shall give way except that, gliders shall give way to
 - (1) rotary wing aircraft.
 - (2) "heavy" aeroplanes.
 - (3) airships.
 - (4) balloons.

3. "Controlled Airspace" means an airspace of defined dimensions within which
 - (1) aircraft must proceed in accordance with a SCATANA clearance.
 - (2) an Air Traffic Control (ATC) service is provided.
 - (3) only aircraft equipped with functioning two-way radio may operate.
 - (4) Control is provided for instrument flight rules (IFR) traffic only.

4. Except for ultra-light aeroplanes, no person shall fly an aircraft in Canada unless
 - (1) it is registered.
 - (2) there is in force with respect to the aircraft a Certificate of Airworthiness or a Flight Permit.
 - (3) its nationality and registration marks are affixed to the aircraft in a proper manner, and are clear and visible.
 - (4) all of the above conditions are met.

5. No person shall attempt to fly as a flight crew member of a glider if
 - (1) less than five take-offs and landings have been completed in the preceding six months.
 - (2) within the preceding 12 hours alcohol has been consumed.
 - (3) experiencing a physical disability likely to prohibit immediate licence renewal.
 - (4) less than five supervised take-offs and landings have been completed in the preceding six months

6. Except when taking off from or landing at an airport or military aerodrome aircraft shall not be flown over the built-up areas of any city, town or other settlement or over an open-air assembly of persons except at an altitude that will permit in the event of an emergency, the landing of the aircraft without undue hazard to persons or to property on the surface; such altitude shall not in any case be less than above the highest obstacle within a horizontal radius of two thousand feet from the aircraft. The correct entry to complete the blank space is
- (1) 500 feet.
 - (2) 1,000 feet.
 - (3) 2,000 feet.
 - (4) 3,000 feet.
7. A steady green light directed at an aircraft in flight means
- (1) cleared to land.
 - (2) return for landing.
 - (3) cleared to base leg.
 - (4) cleared for final.
8. In radio communications the signal which means that grave and imminent danger threatens and immediate assistance is required is the spoken phrase
- (1) SECURITE, SECURITE.
 - (2) MAYDAY, MAYDAY, MAYDAY.
 - (3) PAN PAN, PAN PAN, PAN PAN.
 - (4) ALERT, ALERT.
9. A glider is preparing for take-off from an aerodrome in the altimeter setting region. If the current altimeter setting is not available the altimeter shall be set to
- (1) the mean sea level pressure of the aerodrome.
 - (2) the standard pressure setting.
 - (3) the elevation of the aerodrome.
 - (4) zero.
10. The minimum flight visibility for VFR flight in a Control Area is
- (1) 6 miles.
 - (2) 3 miles.
 - (3) 2 miles.
 - (4) 1 mile.
11. Every owner of an aircraft shall preserve the Aircraft Journey Log for
- (1) one year after the date of the last entry in the log.
 - (2) three years after the date of the last entry log.
 - (3) as long as the aircraft has a valid Certificate of Airworthiness.
 - (4) the life of the aircraft.

12. An Air Traffic Control "instruction"
- (1) is in effect "advice" provided by ATC and does not require acknowledgement by the pilot concerned.
 - (2) is the same as an ATC "clearance" when issued by a Flight Service Section.
 - (3) requires compliance when received unless aircraft safety is jeopardized.
 - (4) must be "read back" in full to the controller and confirmed before becoming effective.
13. Pilots are warned of the dangerous turbulence existing in the wake of large aeroplane in flight. The turbulence referred to is caused by
- (1) expanding wing tip vortices.
 - (2) propeller or jet wash.
 - (3) air displaced by the fuselage.
 - (4) the vacuum created by aircraft passage.
14. No person shall walk, drive or park any vehicle on any part of an airport used for the movement of aircraft, except in accordance with permission given by the appropriate ATC unit or, in the absence of any such unit, by
- (1) an airport guide or commissionnaire.
 - (2) the local flying club or school manager.
 - (3) the operator of the airport.
 - (4) the local police or RCMP.
15. Pilots should be aware that an early symptom of hypoxia (lack of oxygen) is a sense of
- (1) well-being.
 - (2) drowsiness.
 - (3) dizziness.
 - (4) panic.
16. 'Day' in Canada is defined as that period of time between
- (1) sunrise and sunset.
 - (2) one hour before sunrise and one hour after sunset.
 - (3) the end of morning civil twilight and the beginning of evening civil twilight.
 - (4) the beginning of morning civil twilight and the end of evening civil twilight.
17. Unless authorized by ATC, no person shall fly a glider within Class C airspace unless
- (1) the pilot receives and acknowledges a VFR clearance to do so.
 - (2) the ground visibility is at least 3 miles.
 - (3) the pilot maintains a listening watch on an appropriate radio frequency.
 - (4) all of the above conditions are met.

18. The filing of a flight plan or itinerary is only required when a glider pilot plans to proceed
 - (1) on an aerobatic flight.
 - (2) to an altitude of more than 5,000 feet.
 - (3) on a passenger carrying flight.
 - (4) more than 25 NM from departure point.

19. The pilot-in-command of a glider shall not fly at cabin pressure altitudes between 13,000 and 15,000 feet above MSL
 - (1) unless continuously wearing and using oxygen masks supplying oxygen.
 - (2) for more than 30 minutes, unless oxygen masks and a supply of oxygen is available.
 - (3) unless passengers are continuously wearing and using oxygen masks supplying oxygen.
 - (4) for more than 45 minutes, unless oxygen masks and a supply of oxygen is available.

Single place glider, weight and balance data.

Maximum permissible gross weight 715 LB.
C of G limits 90 to 96 inches aft of the datum.

Load Items	Weight LB	Arm Inches	Moment
Glider Weight Empty	500		49,000
Pilot		70	11,200
Ballast	<u>40</u>	<u>70</u>	<u> </u>

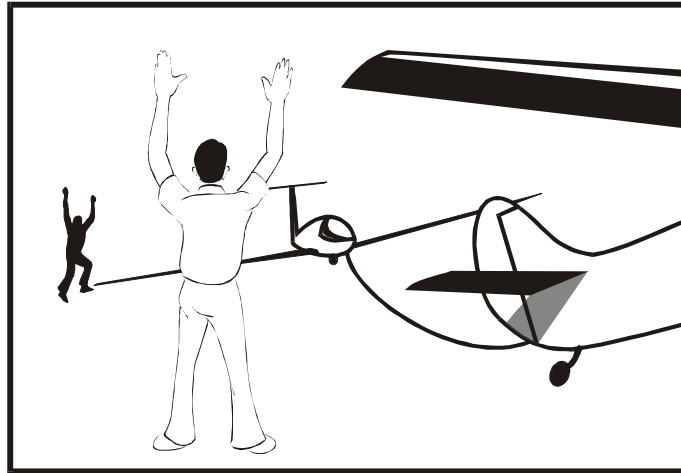
20. Loaded as above the
 - (1) C of G is at the aft limit.
 - (2) C of G is at the forward limit.
 - (3) gross weight is exceeded
 - (4) gross weight is 715 LB.

21. The total lift force acting on an aerofoil in flight is considered to act
 - (1) upwards with reference to the earth's surface.
 - (2) at 90° to the aircraft longitudinal axis.
 - (3) at 90° to the average relative air flow.
 - (4) at 90° to the average wing chord.

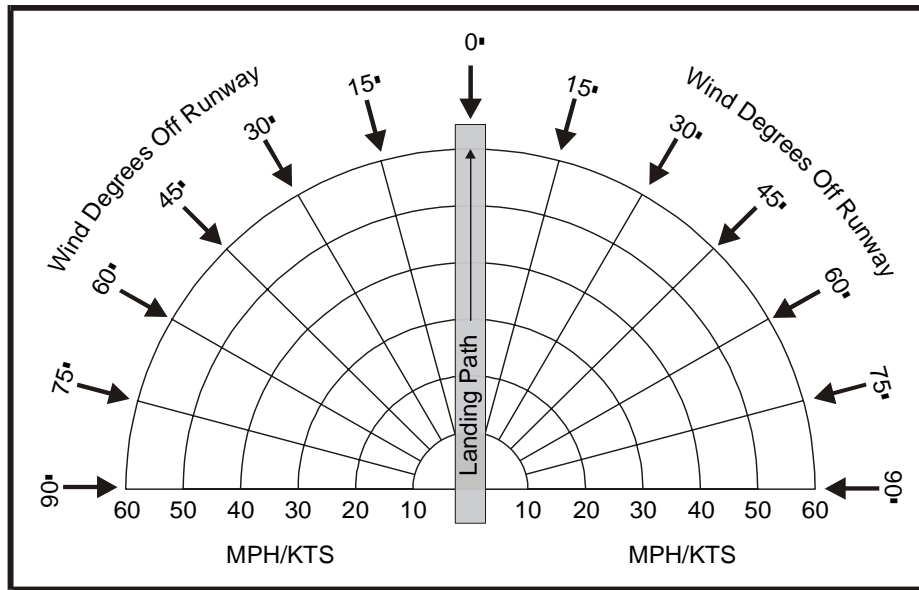
22. At the point of stall an increase in the angle of attack results in
 - (1) more lift and more drag.
 - (2) more lift and less drag.
 - (3) less lift and more drag.
 - (4) no effect on lift or drag.

23. Longitudinal stability refers to stability about the
- (1) longitudinal axis.
 - (2) lateral axis.
 - (3) normal axis.
 - (4) directional axis.
24. The stalling speed of a glider is
- (1) the same in coordinated turns as in straight and level flight.
 - (2) inversely proportional to the wing loading.
 - (3) not affected by aerodynamic loads.
 - (4) greater in coordinated turns than in straight and level flight
25. The ratio of the total lift force acting on the wings of a glider during flight to the gross weight of the glider is known as the
- (1) lift/drag ratio.
 - (2) aspect ration.
 - (3) power factor.
 - (4) load factor.
26. In straight and level flight at 6,000 feet ASL a glider stalls at 35 KT IAS. At what IAS will it stall in similar circumstances in the circuit at 1,000 feet ASL?
- (1) 27 KT.
 - (2) 32 KT.
 - (3) 35 KT.
 - (4) More than 35 KT.
27. While on tow a glider pilot is unable to release the tow rope. The signal to indicate this condition to the tow pilot is to
- (1) yaw the glider to the right and left in a series of skidding turns.
 - (2) commence a series of "S" turns at normal tow position.
 - (3) porpoise rapidly between high and low tow positions.
 - (4) fly to the left of the tug and rock the glider's wings.
28. A "weak link" would most likely be associated with a
- (1) tow line.
 - (2) control cable.
 - (3) dive brake.
 - (4) canopy latch.

29. At a gliding ratio of 15:1, a glider descending 1,000 feet in still air will move forward a distance closest to
- (1) 2.2 NM.
 - (2) 2.5 NM.
 - (3) 2.8 NM.
 - (4) 3.1 NM.



30. The above signal means
- (1) number two for take off.
 - (2) take up slack.
 - (3) stop.
 - (4) begin take-off.
31. In gliding, an important use of wing spoilers is to
- (1) increase the rate of descent at the same airspeed.
 - (2) increase lift without increasing drag.
 - (3) make safe approaches possible at slower airspeeds.
 - (4) improve the lift/drag ratio.
32. To maintain an IAS of 50 KT during an approach through a wind gradient where the head wind is decreasing, the pilot should
- (1) pitch the nose down.
 - (2) pitch the nose up.
 - (3) gradually apply spoilers.
 - (4) maintain a constant pitch attitude.



Appendix 0047

33. The flight manual states that the maximum cross-wind landing component applicable to a particular glider is $090^{\circ}/10$ KT. Which wind velocity will permit landing within this limit when landing on runway 27?

- (1) 240° M/24 KT.
- (2) 290° M/20 KT.
- (3) 300° M/26 KT.
- (4) 330° M/15 KT.

34. When turning from downwind to base leg for landing, a strong wind could cause a pilot to experience an illusion of

- (1) skidding.
- (2) side-slipping.
- (3) overbanking.
- (4) increasing ground speed.

The chart to be used with this portion of the examination is the TORONTO VFR Navigation Chart labelled FOR EXAMINATION PURPOSES ONLY Series 23. Charts may be obtained from the Canada Map Office, 130 Bentley Avenue, Ottawa, Ontario, Canada, K1A 0E9.

35. A straight line drawn between any two points on this chart most closely approximates a

- (1) great circle.
- (2) rhumb line.
- (3) parallel of latitude.
- (4) meridian.

36. The elevation of Carp Airport (N45°19', W76°01') is
- (1) 350 feet.
 - (2) 382 feet.
 - (3) 712 feet.
 - (4) 1,062 feet.
37. An aircraft in flight at an altitude of 2500 ASL feet over Carp Airport would be flying
- (1) outside of controlled airspace.
 - (2) in the Ottawa Control Zone.
 - (3) in controlled airspace.
 - (4) above an Aerodrome Traffic Zone.
38. The object of "swinging" a compass is to minimize error and record the
- (1) variation on various headings.
 - (2) deviation on various headings.
 - (3) turning error on all headings.
 - (4) acceleration errors on various headings.
39. When you put your aircraft away at night the altimeter set to the elevation of the airport reads 520 feet. During the night a low pressure area moves over the airport and the atmospheric pressure drops sharply. On checking the altimeter the next morning you would expect the indicated altitude to be
- (1) 520 feet.
 - (2) higher than 520 feet.
 - (3) lower than 520 feet.
 - (4) the same as the current altimeter setting.
40. The most important element in the atmosphere from the weather standpoint is
- (1) water droplets.
 - (2) nitrogen.
 - (3) water vapour.
 - (4) oxygen.
41. Clouds which form when moist warm air overruns cold air, are caused because the warm air
- (1) is cooled by the cold air underneath.
 - (2) is cooled by the surrounding cold air aloft.
 - (3) becomes unstable as a result of cooling from below.
 - (4) cools as a result of expansion as it rises.

42. Wind is caused by
- (1) the rotation of the earth.
 - (2) friction between the air and the ground.
 - (3) horizontal pressure differences.
 - (4) the movements of fronts.
43. In the northern hemisphere, the winds blow
- (1) direct from high to low pressure areas.
 - (2) clockwise around a high and counter-clockwise around a low.
 - (3) at a 30° angle out of a low pressure area.
 - (4) at a 30° angle into a high pressure area.
44. During a descent from 2,000 feet AGL to the surface you will usually find that the wind
- (1) veers and increases.
 - (2) backs and increases.
 - (3) veers and decreases.
 - (4) backs and decreases.
45. The lapse rate is the rate of change of
- (1) temperature with height.
 - (2) pressure with height.
 - (3) pressure in the horizontal.
 - (4) temperature in the horizontal.
46. Air masses which are being cooled from below are characterized by
- (1) strong winds, cumulus cloud, good visibility.
 - (2) uniform temperature, good visibility.
 - (3) decreasing humidity, poor visibility.
 - (4) fog, poor visibility and layer cloud.
47. The following sequence of clouds is observed at an airport: cirrus, altostratus, nimbostratus. The observer should expect
- (1) the passage of a cold front.
 - (2) anticyclonic weather.
 - (3) the passage of a warm front.
 - (4) clearing skies and a decrease in temperature.
48. Which clouds have the international family prefix "Cumulo"?
- (1) Clouds with bases between surface and 6,500 feet AGL.
 - (2) Clouds with bases between 6,500 feet and 20,000 feet AGL.
 - (3) Clouds with bases above 20,000 feet AGL.
 - (4) Clouds of vertical development.

49. Unless otherwise noted, cloud bases are forecast in height
- (1) ASL in both the Area Forecast and the TAF.
 - (2) AGL in both the Area Forecast and the TAF.
 - (3) AGL in Area Forecast and ASL in the TAF.
 - (4) ASL in the Area Forecast and AGL in the TAF.
50. Regarding cloud amount, the words "overcast" and "broken" mean respectively
- (1) 7/8 to 8/8 and 5/8 to 8/8 cloud.
 - (2) 7/8 to 8/8 and 4/8 to 7/8 cloud.
 - (3) 8/8 and 4/8 to 7/8 cloud.
 - (4) 8/8 and 5/8 to 7/8 cloud.

APPENDIX 1

ANSWER KEY

<u>QUESTION NO.</u>	<u>ANSWER</u>	<u>QUESTION NO.</u>	<u>ANSWER</u>
1	(1)	26	(3)
2	(4)	27	(4)
3	(2)	28	(1)
4	(4)	29	(2)
5	(3)	30	(3)
6	(2)	31	(1)
7	(1)	32	(1)
8	(2)	33	(2)
9	(3)	34	(1)
10	(2)	35	(1)
11	(1)	36	(2)
12	(3)	37	(3)
13	(1)	38	(2)
14	(3)	39	(2)
15	(1)	40	(3)
16	(4)	41	(4)
17	(4)	42	(3)
18	(4)	43	(2)
19	(1)	44	(4)
20	(2)	45	(1)
21	(3)	46	(4)
22	(3)	47	(3)
23	(2)	48	(4)
24	(4)	49	(4)
25	(4)	50	(4)