1. Lateral stability is:
   A. Stability around the lateral axis
   B. Stability around the longitudinal axis
   C. Stability around the normal axis
   D. Pitch stability

2. At the point of a stall:
   A. The angle of attack is less than the critical angle
   B. Thrust is less than drag
   C. Lift is less than weight
   D. The angle of incidence is less than the critical angle

3. An aircraft which is stable due to the design features of the airplane is:
   A. Statically stable
   B. Dynamically stable
   C. Inherently stable
   D. None of the above

4. The aspect ratio of a wing is calculated by:
   A. Multiplying the span by the average chord
   B. Adding the span to the average chord
   C. Dividing the span by the average chord
   D. Subtracting the average chord from the span

5. All forms of drag are divided into two main types. They are:
   A. parasite and induced
   B. form drag and skin friction
   C. induced and form
   D. interference and parasite

6. The force which acts forward parallel to the longitudinal axis is called:
   A. Weight
   B. Drag
   C. Thrust
   D. Lift

7. With respect to priority for right-of-way:
   A. A tow aircraft towing a glider has priority over a glider
   B. A glider has priority over an airship
   C. When both are landing an airplane at lower altitude has priority over a glider at higher altitude.
   D. All of the above
8. An advantage of a high aspect ratio is:
   A. Lower stall speed
   B. Lower interference drag
   C. Higher maximum G loading
   D. Lower induced drag

9. Lateral stability is influenced by:
   A. Keel effect
   B. Dihedral
   C. Sweepback
   D. All of the above

10. Which of the following statements is true?
    A. Longitudinal stability is stability around the lateral axis.
    B. Longitudinal stability is stability of the longitudinal axis.
    C. Lateral stability is stability around the lateral axis.
    D. Both A and B are true.

11. The point through which the resultant of the weights of all the various parts of the airplane
    passes, in every attitude that it can assume is the:
    A. Centre of drag
    B. Centre of weight
    C. Centre of gravity
    D. The opposite of the centre of pressure

12. Aileron drag is:
    A. Caused by the down going aileron
    B. Causes a yaw in the direction of bank
    C. Causes a yaw opposite the direction of bank
    D. Both A and C

13. The initial tendency of a glider to return to its original position, after being disturbed, without
    corrective action by the pilot is:
    A. Positive static stability
    B. Negative static stability
    C. Positive dynamic stability
    D. Negative dynamic stability

14. Relative airflow:
    A. With the chord line forms the angle of attack
    B. Is parallel to the direction of motion
    C. Is opposite to the direction of motion
    D. All of the above
15. The elevator controls motion around the ________________ axis.
   A. Longitudinal
   B. Normal
   C. Lateral
   D. Vertical

16. During a climb, the wind can be expected to:
   A. Back and decrease
   B. Back and increase
   C. Veer and decrease
   D. Veer and increase

17. The altitude above ground level of cloud base can be determined from:
   A. Surface temperature
   B. Dew Point
   C. Lapse rate
   D. All of the above

18. During a climb to cruising altitude you notice the temperature is higher at altitude than on the ground. What weather phenomenon have you encountered.
   A. A thermal
   B. A high pressure area
   C. A low pressure area
   D. An inversion

19. A front is:
   A. The zone between a high pressure and low pressure area.
   B. The advancing boundary of a squall line.
   C. The transition zone between two air masses.
   D. An area of significant weather.

20. On a weather map red line with semicircles in the direction of advance represents a
   A. Warm front
   B. A cold front
   C. A trowl
   D. A col

21. The troposphere is distinct from other layers of the atmosphere because:
   A. Temperature increases with altitude.
   B. It is the layer where all weather occurs.
   C. It is dominated by charged particles or ions.
   D. The ICAO standard atmospheric conditions never apply.

22. During a descent of several thousand feet, the wind can be expected to:
   A. Back and increase
   B. Veer and increase
   C. Back and decrease
   D. Veer and decrease
23. When the difference between temperature and dewpoint is small:
   A. The relative humidity is low
   B. The relative humidity is high
   C. Fog will always form
   D. Fog will never form

24. Which type of cloud is associated with a thunderstorm?
   A. Cumulus
   B. Altocumuluscastelanus.
   C. Stratocumulus
   D. Cumulonimbus

25. If the warm air mass of a warm front is moist and stable, stratiform clouds develop in a distinctive sequence:
   A. Cirrus, cirrostratus, altostratus, nimbostratus, stratus
   B. Cirrus, cirrostratus, altocumulus, cumulonimbus, cumulus.
   C. Cirrostratus, altostratus, nimbostratus, cirrus.
   D. Cirrus, cirrocumulus, altocumulus, cumulonimbus, cumulus.

26. The passing of a warm front is marked by:
   A. A rise in temperature.
   B. A drop in temperature.
   C. A rise in temperature and the sky becomes relatively clear.
   D. A drop in temperature and the amount of cloud or precipitation increase.

27. When taking off within the Standard Pressure Region, the altimeter should be set to:
   A. The current altimeter setting for the airport or the airport elevation above sea level
   B. Zero feet above sea level
   C. 29.92 inches of Mercury
   D. None of the above

28. The steeper the angle of bank for any given airspeed:
   A. The larger the radius of turn
   B. The greater the rate of turn
   C. The higher the stalling speed
   D. Both B and C.

29. The neutral region between to high pressure and two low pressure areas is a:
   A. Trough
   B. Ridge
   C. Col
   D. Trowal
30. Lines drawn on a map which join areas of equal atmospheric pressure are:
   A. Isogonic lines.
   B. Agonic lines.
   C. Isobars.
   D. None of the above

31. METAR CYUL 200300Z 26013G19KT 15SM FEW020 BKN075 BKN250 M16/M20 A3039 RMK
   SC1AC7CI1 SC TR CI TR SLP298=

   From the METAR above you know that:
   A. The ceiling is at 2000 feet AGL
   B. The wind is gusting at 13 knots
   C. The difference between temperature and dewpoint is 4°C
   D. There are 5 oktas of cloud at 25,000 feet

32. Select the correct completion for this statement: Taxiways are _____________.
   A. identified by a letter, blue lights at night and yellow centre lines.
   B. identified by a number, blue lights at night and yellow centre lines.
   C. identified by a letter, amber lights at night and yellow centre lines.
   D. identified by a letter, blue lights at night and white centre lines.

33. Some wings are constructed with no external bracing at all. These are known as __________ wings.
   A. Low
   B. Cantilever
   C. Monocoque
   D. Internally braced

34. Spoilers are devices fitted to the wing which increase and decrease ___________.
   A. Speed, drag
   B. Weight, lift
   C. Lift, drag
   D. Drag, lift

35. As the angle of attack of an airfoil is increased up to the point of stall, the centre of pressure will move:
   A. Will not move
   B. Back
   C. Up
   D. Forward

36. ___________ refers to the shape of the wing as seen from directly above.
   A. Top view
   B. Plan form
   C. Form view
   D. Wing view
37. The load factor is:
   A. the ratio of the actual load acting on the wings to the gross weight of the airplane.
   B. the force acting on an airplane in a turn.
   C. The ratio of the live load to the dead load.
   D. Both A and C.

38. Which of the following instruments use the principle of gyroscopic inertia for their principle function?
   A. Artificial Horizon or Attitude Indicator.
   B. Directional Gyro or Heading Indicator.
   C. Turn Coordinator or Turn and Bank Indicator.
   D. A and B.

39. Movement of the airplane around the lateral axis is called _______ and is controlled by movement of the ______________.
   A. Yaw, rudder
   B. Roll, ailerons
   C. Pitch, elevators
   D. Adverse yaw, ailerons

40. Select the correct statement for circuit operations at an uncontrolled airport no mandatory frequency procedures in effect.
   A. You may join the circuit directly at any leg.
   B. The proper procedure is to approach from the upwind side and enter crosswind at circuit height. Taking account of traffic, join the circuit on the downwind leg.
   C. You may join the circuit directly on the downwind leg provided you have ascertained there is not conflict with other traffic.
   D. Both B and C.

End of Exam for Glider Applicants
41. The type of engine most commonly used in general aviation airplanes is:
   A. Radial
   B. In Line
   C. Turboprop
   D. Horizontally Opposed

42. The four strokes of the four-stroke cycle, in order, are:
   A. Induction, Compression, Power, Exhaust
   B. Induction, Power, Compression, Exhaust
   C. Compression, Power, Induction, Exhaust
   D. Power, Compression, Exhaust, Induction

43. During the power stroke:
   A. The exhaust valve is open.
   B. The intake valve is open.
   C. Both valves are open.
   D. None of the above.

44. The main functions of engine oil are:
   A. Lubrication, Flushing, Sealing
   B. Flushing, Sealing, Cooling
   C. Cooling, Sealing, Lubrication, Flushing
   D. Sealing, Cooling, Flushing

45. When the flaps of an airplane are fully deflected, the following occurs:
   A. Lift is increased.
   B. Drag is increased.
   C. The stalling speed is decreased.
   D. All of the above.

46. Pre-ignition may be caused by:
   A. carbon deposits in the cylinders.
   B. overly lean mixture.
   C. overly rich mixture.
   D. high power settings at high altitudes.

47. Which of the following may occur from operating the engine a too lean mixture?
   A. Sudden cutting out.
   B. Detonation.
   C. Engine failure.
   D. All of the above.

48. An airplane must always be serviced with a fuel of the correct or a higher octane rating because:
   A. octane provides the correct air fuel ratio.
   B. octane helps cool the engine at high power settings.
   C. octane minimizes detonation.
   D. octane minimizes pre-ignition.
49. You are planning a cross country flight of 225 nm in length on a true track of 78°. Winds are 258° true at 15 kts. Your true airspeed is 105 kts. How long will the flight take?
   A. 2 hrs 50 min.
   B. 2 hrs 30 min.
   C. 1 hr 52 min.
   D. 1 hr 5 min.

50. For the same flight, what true airspeed is required to complete the flight in 2 hours.
   A. 127.5 kts
   B. 97.5 kts
   C. 120 kts
   D. 90 kts