

ANSWER KEY TO REVIEW QUESTIONS:

- 1- Spars are major wing components which run from the chord to the trailing edge. They carry the loads absorbed by the aircraft. False
- 2- What is the main role of the undercarriage?
Absorb the shock of landing, support the weight of the aircraft and permit movement on the ground.
- 3- What is the term used to designate the curved shape of an aircraft wing? Airfoil.
- 4- Angle of Attack is the angle formed between the Chord and the relative airflow.
- 5- The imaginary line which connects the leading edge to the trailing edge of a wing is called : the Chord.
- 6- On the chord line, the point which corresponds with the resultant of all the forces of lift is called : Centre of Pressure
- 7- What are the two layers of airflow found on the upper surface of the wing?
Laminar layer and turbulent layer
- 8- List two functions of the spoilers.
Destroy lift and increase drag
- 9- List the four forces acting on an aircraft in flight:
Lift, weight, thrust and drag.
- 10- What kind of drag is caused by the lift-creating surfaces?
Induced
- 11- What is “washout” and what does it do?
Reduction of the Angle of Incidence near the wingtips ; it improves stall characteristics.
- 12- If I bank my aircraft to the right, what are the ailerons doing?
The right aileron rises and the left aileron descends.
- 13- What is the secondary effect of yaw? Give a brief description.
The wing on the outside of the turn moves more quickly through the air and therefore creates more lift. The result is a roll in the direction of the yaw.
- 14- What is the main purpose of trim?
Reduce the force applied by the pilot on the controls.
- 15- The total weight of the aircraft divided by the surface of the lifting surfaces is called:
wing loading.

- 16- The actual weight carried by the wings divided by the total weight of the aircraft is called : load factor.
- 17- In a level turn at a constant speed, the higher the angle of bank the :
d. all of the above.
- 18- The tendency of an aircraft to return to its initial situation after being disturbed is called : stability
- 19- Stability about the lateral axis is called : longitudinal stability. Lateral stability is stability about the longitudinal axis.
- 20- You are on take-off and at the end of the runway, there is a 150' tall tower. What climb speed will you use and why?
Best angle of climb. It will give the greatest increase in altitude for a given distance over the ground.
- 21- List the characteristics of a spin.
Stalled condition, airspeed is constant, rate of descent high but constant, radius of turn constant, load factor constant.
- 22- List the characteristics of a spiral dive
Not stalled; speed increasing; rate of descent increasing; radius of turn decreasing; load factor increasing; angle of bank increasing.
- 23- What does the lubber line on the compass indicate?
compass heading
- 24- If you are turning away from the South, what error will the compass display?
the compass will lead ahead of the real heading.
- 25- When accelerating on an East-West heading, the compass tends to indicate a turn towards the north.
- 26- The ASI is linked to which pressure source?
Dynamic (pitot) and static
- 27- Which pressure source is linked to the VSI? Static.
- 28- When an aircraft passes from region of higher pressure to a region of lower pressure, the altimeter will indicate:
b. an altitude above the actual altitude ;
- 29- When flying from a warm air mass to a cold air mass, the altimeter reads high due to the increase of the pressure gradient.
- 30- Mountain effect causes the altimeter to read high.

31- What is the VNE? Never exceed speed

32- What does the yellow arc on the airspeed indicator indicate? Caution speed.

33- The vertical speed indicator has a lag of : 6 to 9 seconds.

34- What does the turn and bank indicator show?

Rate of turn; the ball shows if the turn is coordinated.

35- What instrument(s) are gyroscopic instruments?

Heading indicator, artificial horizon, turn and bank indicator.