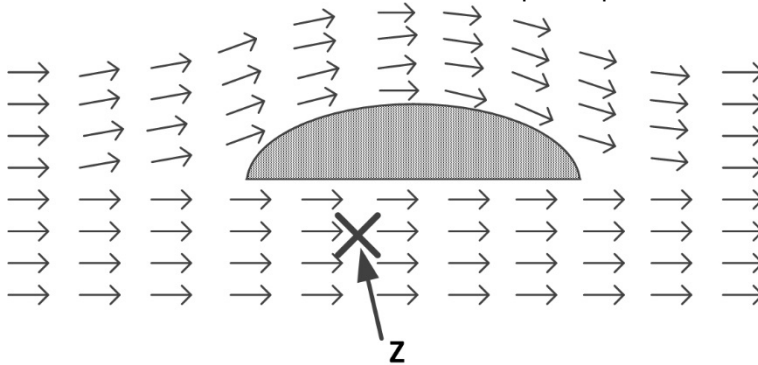


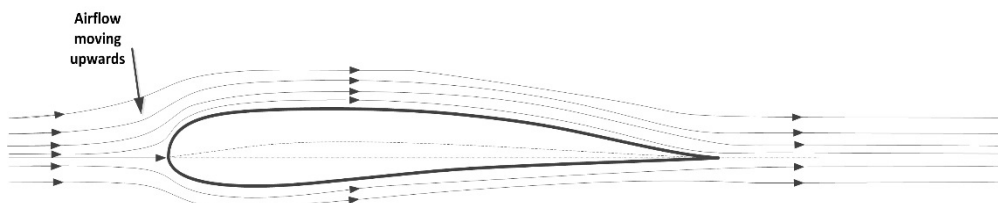
### Question block created by wizard

This exam contains 20 questions

1. In the atmosphere of the earth, where starts the Tropopause?
  - a. At the Transition Altitude (TA).
  - b. At about 51 km height.
  - c. At the altitude where the temperature remains stable with an increase in height.
2. The mean sea level pressure is....
  - a. the mean atmospheric pressure at sea level on a standard day (1bar, 20° C).
  - b. the mean atmospheric pressure at sea level.
  - c. the mean pressure of the air at sea level, corrected for a temperature of 20° C.
3. This is an object placed in a sub-sonic air flow. At the location of ' Z ' the pressure is higher, lower or the same in reference to the atmospheric pressure?

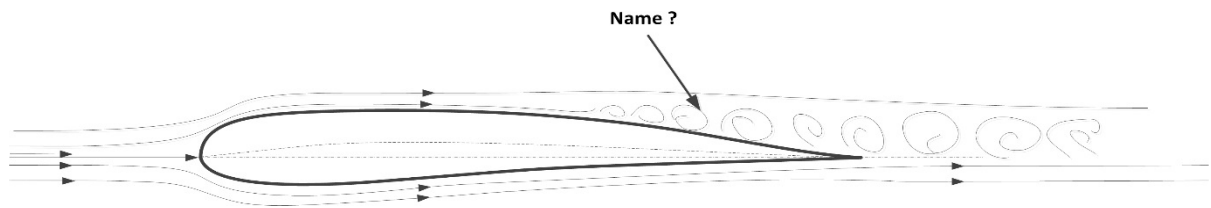


- a. Higher
  - b. Same
  - c. Lower
4. As indicated in the figure, the airflow in front of the aerofoil is moving upward. How is this called?



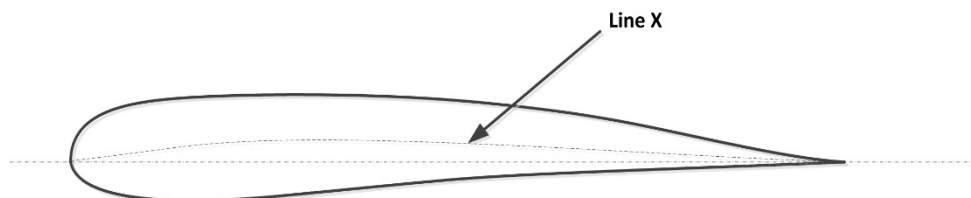
- a. Up Wash
- b. Wake
- c. Shock Wave

5. What is indicated by the arrow in this figure?



- a. Turbulent airflow.
- b. Sub-sonic, Boundary layer flow
- c. Down Wash

6. In the figure an aerofoil is indicated. What is the name of the indicated line X?



- a. Camber Line
- b. Span Line
- c. Chord Line

7. An aerofoil with a low camber is typically used for....

- a. aircraft flown at high speeds.
- b. vertical stabilizers.
- c. aircraft flown at low speeds.

8. The resulting force on the wing acts...

- a. on the chordline.
- b. on the camberline.
- c. in the centre of gravity.

9. Where does the resulting force on the wing come from?

- a. The sum of all under-pressure and over-pressure forces.
- b. The sum of all under-pressure forces.
- c. The sum of all the over-pressure forces.

**10.** The stalling of an aerofoil is affected by the...

- a. angle of attack.
- b. drag.
- c. transition speed.

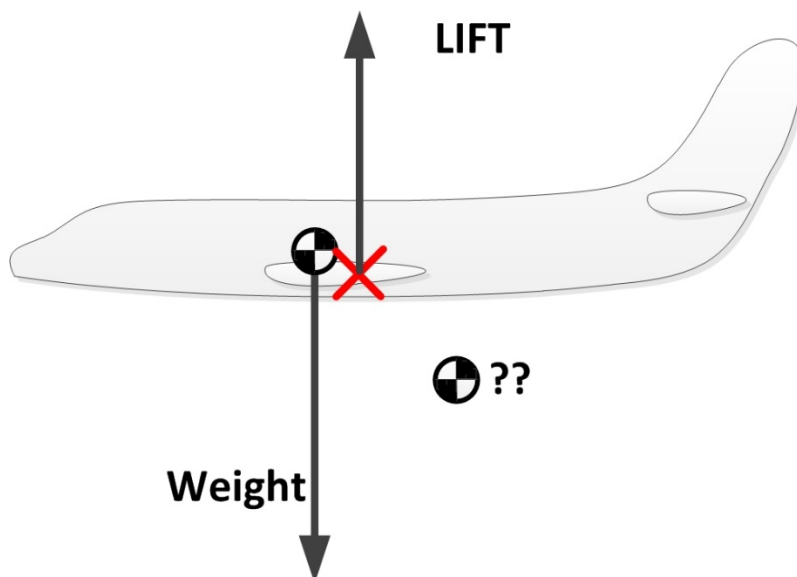
**11.** A stall is...

- a. not dependent on speed.
- b. the result of an increase in the angle of attack.
- c. present in boundary layer of the stagnation point.

**12.** What is the effect of aerofoil contamination on the boundary layer?

- a. The wing lift capability deteriorates.
- b. The wing lift capability stays stable.
- c. The aircraft weight may decrease.

**13.** In the picture, the weight intervenes in a certain point. What is the name of this point?



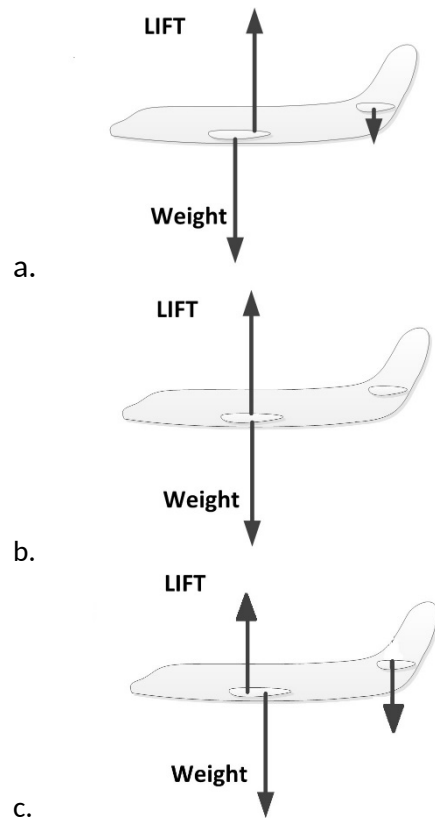
- a. Stagnation Point
- b. Centre of gravity
- c. Pressure Point

**14.** A glider (without an engine) moves forward. How is this possible?

- a. By the drag element of the lift which pushes the aircraft forward.
- b. By a component of the weight which pulls the aircraft forward.

c. By the tail wind.

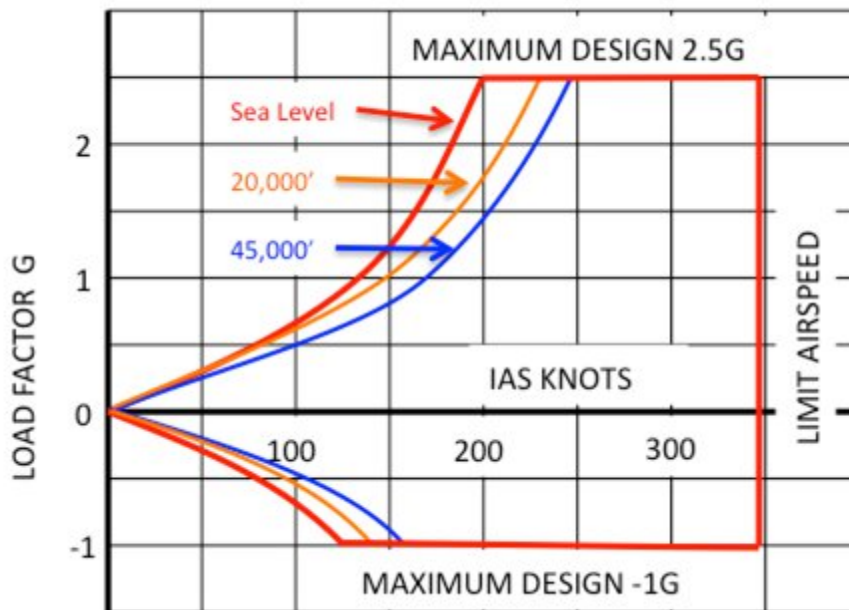
**15.** During a normal steady state flight, the resultant of Lift and weight forces are properly represented in picture?



**16.** Which of the following control surfaces are primary control surfaces?

- a. Roll spoilers, elevators, tabs.
- b. Elevators, ailerons, rudder.
- c. Elevators, roll spoilers, tabs.

17. What is the Normal Stall Speed at sea level in the shown manoeuvring or flight envelope?



- a. Approximately 75 knots.
- b. Approximately 200 knots.
- c. Approximately 125 knots.

18. Lowering the flaps....

- a. increases drag.
- b. increases lift.
- c. increases drag and lift.

19. Yaw dampers are designed to....

- a. reduce the effect of crabbing due to cross winds.
- b. assist the pilot to move the rudder.
- c. prevent Dutch Roll.

20. Directional stability is maintained by....

- a. the ailerons.
- b. the vertical tail-plane and controlled by the rudder.
- c. the horizontal tail-plane and controlled by the elevators.