**MODULE 08 BASIC AERODYNAMICS**

**(SUB MODULE 02 AERODYNAMICS )**

Q.1 The C of P is the point where.

A. the lift can be said to act.

B. the three axis of rotation meet.

C. all the forces on an aircraft act.

Correct Answer is. the lift can be said to act.

Ref: (EASA MODULE 08 BOOK SUB MOD 02) Level- 2

Q.2 At stall, the wingtip stagnation point.

A. doesn’t move.

B. moves toward the lower surface of the wing.

C. moves toward the upper surface of the wing.

Correct Answer is. moves toward the lower surface of the wing.

Ref: (EASA MODULE 08 BOOK SUB MOD 02) Level- 2

Q.3 Which of the following is true?.

A. Lift acts at right angles to the relative airflow and weight acts vertically down.

B. Lift acts at right angles to the wing chord line and weight acts vertically down.

C. Lift acts at right angles to the relative air flow and weight acts at right angles to the aircraft centre line.

Correct Answer is. Lift acts at right angles to the relative airflow and weight acts vertically down.

Ref: (EASA MODULE 08 BOOK SUB MOD 02) Level-2

Q.4 "What happens to air flowing at the speed of sound when it enters a converging duct?."

A. Velocity increases, pressure and density decreases.

B. Velocity, pressure and density increase.

C. Velocity decreases, pressure and density increase.

Correct Answer is. Velocity decreases, pressure and density increase

Ref: (EASA MODULE 08 BOOK SUB MOD 02) Level-2

Q.5 As the angle of attack of an airfoil increases the centre of pressure.

A. remains stationary.

B. moves aft.

C. moves forward.

Correct Answer is. moves forward.

Ref: (EASA MODULE 08 BOOK SUB MOD 02) Level-2

Q.6 The chord line of a wing is a line that runs from.

A. the centre of the leading edge of the wing to the trailing edge.

B. half way between the upper and lower surface of the wing.

C. one wing tip to the other wing tip.

Correct Answer is. the centre of the leading edge of the wing to the trailing edge.

Ref: (EASA MODULE 08 BOOK SUB MOD 02) Level-2

Q.7 The centre of pressure of an aerofoil is located.

A. 30 - 40% of the chord line forward of the leading edge.

B. 50% of the chord line back from the leading edge.

C. 30 - 40% of the chord line back from the leading edge.

Correct Answer is. 30 - 40% of the chord line back from the leading edge.

Ref: (EASA MODULE 08 BOOK SUB MOD 02) Level-2

Q.8 A high aspect ratio wing will give.

A. high profile and low induced drag.

B. low profile and high induced drag.

C. low profile and low induced drag.

Correct Answer is. high profile and low induced drag.

Ref: (EASA MODULE 08 BOOK SUB MOD 02) Level-2

Q.9 Aerofoil efficiency is defined by.

A. lift over drag.

B. lift over weight.

C. drag over lift.

Correct Answer is. lift over drag

Ref: (EASA MODULE 08 BOOK SUB MOD 02) Level-2

Q.10 The relationship between induced drag and airspeed is, induced drag is.

A. directly proportional to the square of the speed.

B. directly proportional to speed.

C. inversely proportional to the square of the speed.

Correct Answer is. inversely proportional to the square of the speed

Ref: (EASA MODULE 08 BOOK SUB MOD 02) Level-2

Q.11 What is Boundary Layer?.

A. Separated layer of air forming a boundary at the leading edge.

B. Sluggish low energy air that sticks to the wing surface and gradually gets faster until it joins the free stream flow of air.

C. Turbulent air moving from the leading edge to trailing edge.

Correct Answer is. Sluggish low energy air that sticks to the wing surface and gradually gets faster until it joins the free stream flow of air.

Ref: (EASA MODULE 08 BOOK SUB MOD 02) Level-2

Q.12 The 'wing setting angle' is commonly known as.

A. angle of dihedral.

B. angle of incidence.

C. angle of attack.

Correct Answer is. angle of incidence.

Ref: (EASA MODULE 08 BOOK SUB MOD 02) Level-2

Q.13 Which of the following types of drag increases as the aircraft gains altitude?.

A. Interference drag.

B. Parasite drag.

C. Induced drag.

Correct Answer is. Induced drag.

Ref: (EASA MODULE 08 BOOK SUB MOD 02) Level-2

Q.14 The upper part of the wing in comparison to the lower.

A. develops less lift.

B. develops the same lift.

C. develops more lift.

Correct Answer is. develops more lift.

Ref: (EASA MODULE 08 BOOK SUB MOD 02) Level-2

Q.15 An aspect ratio of 8 : 1 would mean.

A. span 64, mean chord 8.

B. mean chord 64, span 8.

C. span squared 64, chord 8.

Correct Answer is. span 64, mean chord 8.

Ref: (EASA MODULE 08 BOOK SUB MOD 02) Level-2

Q.16 The amount of lift generated by a wing is.

A. greatest at the tip.

B. constant along the span.

C. greatest at the root.

Correct Answer is. greatest at the root.

Ref: (EASA MODULE 08 BOOK SUB MOD 02) Level-2

Q.17 If the weight of an aircraft is increased, the induced drag at a given speed.

A. will increase.

B. will decrease.

C. will remain the same.

Correct Answer is. will increase.

Ref: (EASA MODULE 08 BOOK SUB MOD 02) Level-2

Q.18 The amount of thrust produced by a jet engine or a propeller can be calculated using.

A. Newton’s 3rd law.

B. Newton’s 2nd law.

C. Newton’s 1st law.

Correct Answer is. Newton’s 2nd law

Ref: (EASA MODULE 08 BOOK SUB MOD 02) Level-2

Q.19 All the lift can be said to act through the.

A. centre of pressure.

B. centre of gravity.

C. normal axis.

Correct Answer is. centre of pressure

Ref: (EASA MODULE 08 BOOK SUB MOD 02) Level-2

Q.20 The concept of thrust is explained by.

A. Bernoulli’s theorem.

B. Newton’s 3rd law.

C. Newton’s 1st law.

Correct Answer is. Newton’s 3rd law.

Ref: (EASA MODULE 08 BOOK SUB MOD 02) Level-2