

Lift Augmentation

1. An aircraft is on a final approach, maintaining a constant IAS and power setting. What will be the effect on the aircraft's rate of descent if flap is lowered
 - a) rate of descent will decrease and then increase
 - b) rate of descent will increase
 - c) rate of descent will decrease
 - d) there will be no effect on rate of descent

- 2 When the flaps are extended at constant speed:
 - a) the lift over drag ratio increases.
 - b) the nose must be raised to remain straight and level.
 - c) the nose must be lowered to prevent the aircraft from climbing.
 - d) the surface area must increase to stay straight and level.

- 3 Extending the flaps:
 - a) increases both lift and drag.
 - b) increases the lift over drag ratio.
 - c) increases gliding range.
 - d) increases the lift and reduces the drag.

- 4 Flaps:
 - a) increase camber, coefficient of lift, and angle of descent.
 - b) decrease the angle of attack, increase lift and range.
 - c) increase range, pilot visibility, lift and drag.
 - d) increase coefficient of lift, drag, pilot visibility and range.

- 5 When the flaps are extended and a constant speed is to be maintained:
 - a) the lift over drag ratio increases and the power required reduces
 - b) the nose must be raised to remain straight and level
 - c) the nose must be lowered or power increased
 - d) the nose must be lowered and power decreased because the reduced angle of attack has a lower drag

- 6 Extending the flaps:
 - a) increases lift and increases the stalling angle of attack
 - b) increases the lift over drag ratio
 - c) increases gliding range
 - d) increases the lift and reduces the critical angle

- 7 If a leading edge flap is extended and aircraft attitude and speed held constant:
- a) C_{LMAX} is increased and the C of P moves to the rear
 - b) C_{LMAX} is decreased and the C of P moves to forward
 - c) C_{LMAX} remains constant and the C of P moves forward
 - d) C_{LMAX} increases and the C of P moves forwards
- 8 Slats:-
- a) increase lift and reduce the stalling angle of attack.
 - b) are near the leading edge of the wing and increase the stalling angle of attack.
 - c) are near the trailing edge of the wing and increase lift.
 - d) decrease the lift and stalling angle of attack.
- 9 Flaps which increase camber and surface area are called:-
- a) slotted flaps.
 - b) split flaps.
 - c) Fowler flaps.
 - d) simple flaps.
- 10 When the flaps are lowered, the stalling speed will:
- a) increase and occur at a higher angle of attack
 - b) decrease and occur at a higher angle of attack
 - c) increase and occur at a lower angle of attack
 - d) decrease and occur at a lower angle of attack
- 11 What effect does lowering flap have on stalling speed
- a) stalling speed is not affected
 - b) stalling speed is increased
 - c) stalling speed is decreased
 - c) result depends on type of flap
- 12 A leading edge slat:
- a) increases the angle at which the wing stalls.
 - b) has no effect on the angle at which the wing stalls.
 - c) decreases the angle at which the wing stalls.
 - d) Will lower the stalling speed but not the stalling angle

- 13 The lift coefficient of a wing:
- a) is a fixed factor and not affected by lift improving devices.
 - b) is increased by the use of flaps and high lift devices.
 - c) reduces when lift improving devices are used.
 - d) Is dependant only on angle of attack
- 14 How would the nose attitude of an aircraft on approach vary with both the leading edge and trailing edge flaps extended as compared with only the trailing edge flaps extended?
- a) it would be lower
 - b) it would be higher
 - c) it would be the same
 - d) an approach is not possible in this configuration
- 15 A flap that moves out to increase wing area and then camber is a
- a) Krueger flap
 - b) Slotted Flap
 - c) Blown flap
 - d) Fowler flap

Answers

**1.b 2.c 3.a 4.a 5.c 6.d 7.d 8.b 9.c 10.d 11.c 12.a 13b
14.b 15.d**