**FLIGHT STABILITY AND DYNAMICS**

**SUB MODULE 04**

Q1. What is controllability ?

**A. Response of an aircraft to the pilots commands.**

B. directed along the pilot flight path

C.NOTA

(REF: EASA MODULE 08 BOOK SUB MODULE 04)

Q2. Types of stability?

A. Static Stability

B. Dynamic Stability

**C. Both A and B**

(REF: EASA MODULE 08 BOOK SUB MODULE 04)

Q3. The initial tendency or direction of movement back to equilibrium .

**A. Static Stability**

B. Dynamic Stability

C. Both A and B

(REF: EASA MODULE 08 BOOK SUB MODULE 04)

Q4. The initial tendency of an aircraft to return to the original state of equilibrium after being disturb.

**A. Positive Static Stability**

B. Negative Static Stability

C. Neutral Static Stability

(REF: EASA MODULE 08 BOOK SUB MODULE 04)

Q5. The initial tendency of the aircraft to remain in a new condition after its equilibrium has been disturbed.

A. Positive Static Stability

B. Negative Static Stability

**C. Neutral Static Stability**

(REF: EASA MODULE 08 BOOK SUB MODULE 04)

Q6. The initial tendency of an aircraft to continue away from the original state of equilibrium after being disturbed.

A. Positive Static Stability

B. Neutral Static Stability

**C. Negative Static Stability**

(REF: EASA MODULE 08 BOOK SUB MODULE 04)

Q7.The aircraft response over time when disturbed from a give AOA , slip, or bank.

A. Static Stability

**B. Dynamic Stability**

C. Both A and B

(REF: EASA MODULE 08 BOOK SUB MODULE 04)

Q8.Longitudinal stability or instability depends on MTCS,

**A. Location of the horizontal tail surfaces with respect to the CG.**

B. Location of the horizontal tail surfaces with respect to the CP.

C. Both A and B

(REF: EASA MODULE 08 BOOK SUB MODULE 04)

Q9. Longitudinal stability or instability depends on

A. Location of wing with respect to the CG

B. as in A location of the horizontal tail surfaces with respect to the CG

**C. as in B Area or size of the tail surfaces.**

(REF: EASA MODULE 08 BOOK SUB MODULE 04)

Q10. Longitudinal stability is the quality that makes an aircraft stable about which axis ?

**A. Lateral axis**

B. Normal axis

C. Longitudinal axis

(REF: EASA MODULE 08 BOOK SUB MODULE 04)

Q11. Nose moves up and down it is?

**A. Pitching movement**

B. Rolling movement

C. Yawing movement

(REF: EASA MODULE 08 BOOK SUB MODULE 04)

Q12. When the AOA increases then CL?

A. Moves aft

**B. Moves forward**

C. Remains same

(REF: EASA MODULE 08 BOOK SUB MODULE 04)

Q13. When the lift on leading is maximum?

A. CL constant neither aft not forward

B. CL moves aft

**C. CL moves forward**

(REF: EASA MODULE 08 BOOK SUB MODULE 04)

Q14. Centre of lift is also known as.........

**A. Centre of Pressure (CP)**

B. Centre of Gravity (CG)

C. AOA

(REF: EASA MODULE 08 BOOK SUB MODULE 04)

Q15. Nose heavy condition ?

**A. CL is to rear of the CG**

B. CL is the to front of the CG

C. Both A and B

(REF: EASA MODULE 08 BOOK SUB MODULE 04)

Q16. Aircraft speed decreases then ...........

A. The speed of the airflow over the wing is increases

**B. The speed of the airflow over the wing is decreases**

C. The speed of the airflow over the wing is constant

(REF: EASA MODULE 08 BOOK SUB MODULE 04)

Q17. In turn the aircraft nose ...........

A. Pitch up more

**B. Pitch down more**

C. Both A and B

(REF: EASA MODULE 08 BOOK SUB MODULE 04)

Q18. High thrust line

**A. Line of thrust passes above the CG**

B. Line of thrust passes below the CG

C. NONE Question

(REF: EASA MODULE 08 BOOK SUB MODULE 04)

Q19. Nose up condition...........

A. Thrust line above the CG

**B. Thrust line below the CG**

C. Thrust line through the CG

(REF: EASA MODULE 08 BOOK SUB MODULE 04)

Q20. Nose down condition .............

**A. Thrust line above the CG**

B. Thrust line below the CG

C. Thrust line through the C

(REF: EASA MODULE 08 BOOK SUB MODULE 04)

Q21. Dihedral wings combat instability in.

A. yaw.

**B. side-slip.**

C. pit*c*h.

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2

Q22. An aircraft, which is longitudinally stable, will tend to return to level flight after a movement in which axis?.

**A. Pitch.**

B. Yaw.

C. Roll.

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2

Q23. The normal axis of an aircraft passes through.

**A. the centre of gravity.**

B. a point at the centre of the wings.

C. at the centre of pressure.

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2

Q24. Directional stability is maintained.

A. by the tailplane, and controlled by the elevators.

**B. by the keel surface and fin, and controlled by the rudder.**

C. by the mainplanes, and controlled by the ailerons

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2

Q25. Sweepback of the wings will.

A. decrease lateral stability.

B. not affect the lateral stability.

**C. increase lateral stability.**

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2

Q26. Directional stability is about the.

A. lateral axis.

B. longitudinal axis.

**C. normal axis.**

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2

Q27. Lateral stability is about the.

**A. longitudinal axis.**

B. normal axis.

C. vertical axis.

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2

Q28.If the aircraft turns and side-slips.

A. the sweepback of the wing will correct the sideslip.

B. the keel surface will correct the sideslip.

**C. the dihedral of the wing will correct the sideslip**

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2

Q29. The fin gives stability about which axis?.

A. Longitudinal axis.

B. Lateral axis.

**C. Normal axis**

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2

Q30. Movement of an aircraft about its normal axis.

A. is rolling.

**B. is yawing.**

C. is pitching.

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2

Q31. Movement of an aircraft about its lateral axis.

A. is rolling.

B. is yawing.

**C. is pitching.**

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2

Q32. Movement of an aircraft about its longitudinal axis.

**A. is rolling.**

B. is yawing.

C. is pitching.

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2

Q33. If an aircraft returns to a position of equilibrium it is said to be.

**A. positively stable.**

B. neutrally stable.

C. negatively stable.

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2

Q34. The pendulum effect on a high wing aircraft.

A. has no effect on lateral stability.

**B. increases lateral stability.**

C. decreases lateral stability.

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2

Q35. Yawing is a rotation around.

A. the lateral axis obtained by the rudder.

**B. the normal axis obtained by the rudder.**

C. the normal axis obtained by the elevator.

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2

Q36. Sweepback of the wings will.

A. increase lateral stability at high speeds only.

B. not affect lateral stability.

**C. increase lateral stability at all speeds**

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2

Q37. If you have an aircraft that is more laterally stable then directionally stable it will tend to : .

A. bank.

B. slip.

**C. skid.**

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2

Q38. Which control surfaces provide lateral control , also longitudinal control and stability?.

A. Ruddervators.

**B. Tailerons.**

C. Flapperons.

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2

Q39. If, after a disturbance, an aeroplane initially returns to its equilibrium state.

A. it has neutral stability.

**B. it has static stability and may be dynamically stable.**

C. it is neutrally unstable.

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2

Q40. The lateral axis is.

A. a straight line through the CG at right angles to the longitudinal and lateral axis.

B. a straight line through the CG from nose to tail.

**C. a straight line through the CG parallel to a line joining the wingtips.**

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2

Q41. The main factors which affect longitudinal stability are.

A. design of the fuselage and position of the CG.

B. design of the mainplane and position of the CG.

**C. design of the tailplane and position of the CG.**

Ref: (EASA MODULE 08 BOOK SUB MOD 04) Level- 2