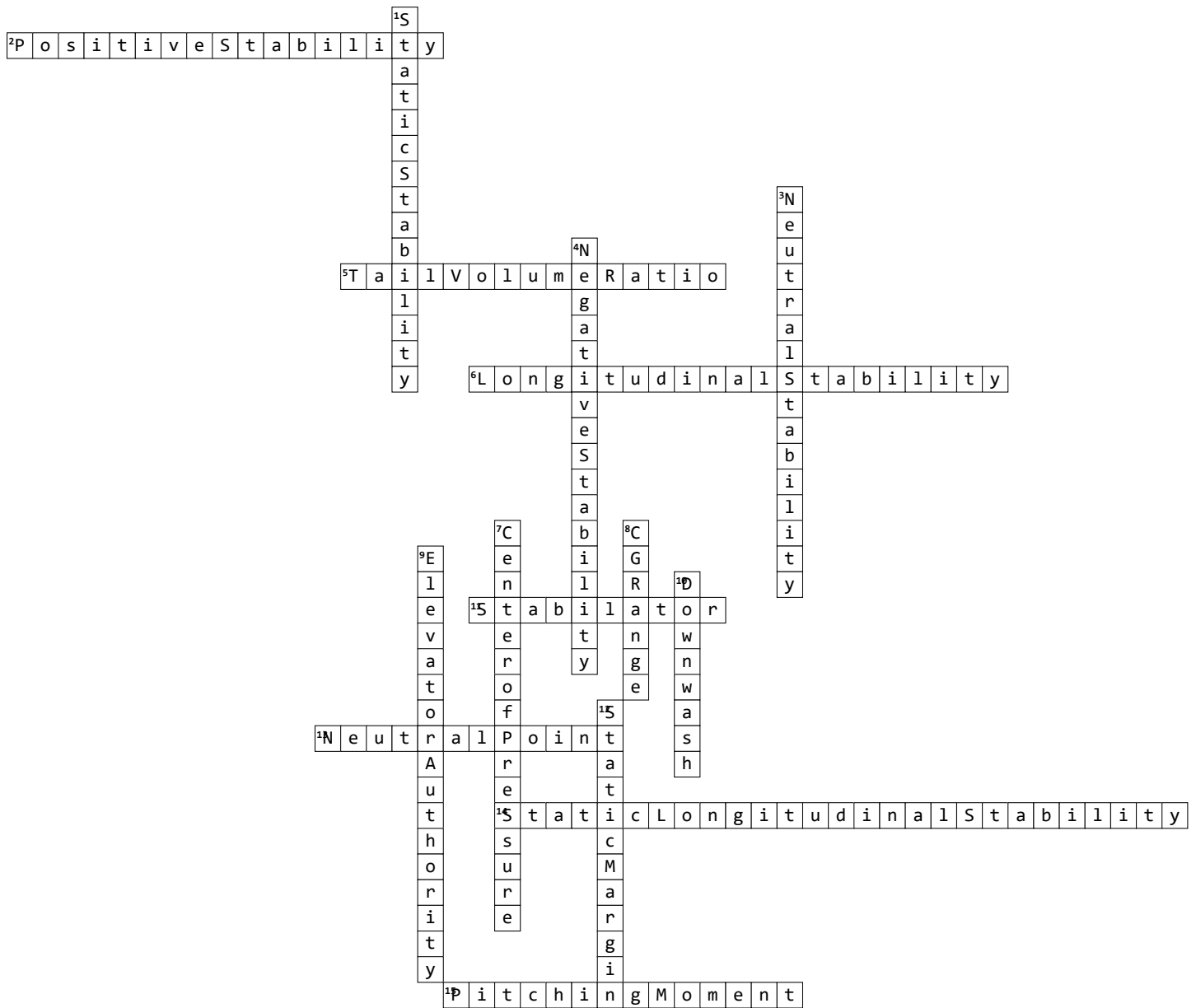


# 19AST302-Flight Dynamics-Unit-3-STATIC LONGITUDINAL STABILITY



## Across

2. A condition where the aircraft returns to its original attitude after a disturbance.
5. A ratio that indicates the effectiveness of the tail in providing longitudinal stability.
6. The stability of an aircraft around its lateral axis, affecting pitch control.
11. A fully movable horizontal tail surface used to control pitch and enhance stability.
13. The point along the aircraft's longitudinal axis where pitching moments are zero.
14. The overall stability of an aircraft in pitch, influenced by design factors.

## Down

1. The initial tendency of an aircraft to return to its original position after a disturbance.
3. A condition where the aircraft neither returns to nor diverges from its original attitude.
4. A condition where the aircraft moves further away from its original attitude after a disturbance.
7. The point along the wing chord line where the aerodynamic forces act.
8. The allowable range of the center of gravity for safe flight, affecting stability.
9. The ability of the elevator to control the pitch attitude of an aircraft.

**15.** The moment that causes an aircraft to rotate about its lateral axis.

**10.** The downward deflection of airflow caused by the wing, affecting the tailplane.

**12.** The distance between the center of gravity and the neutral point, indicating stability.