# Stability, controllability and maneuverability

Science, Physics

Control refers to the effectiveness of displacement of regulating features of an aircraft that determines the rate at which the attitudes and direction of flight can be altered. Aircraft control plays a critical role in other features such as stability and maneuverability since it can easily respond to manipulations.

Maneuverability is the ability of an aircraft to change direction and attitude as required. Maneuverability is vital in maintaining the stability of an aircraft. This implies that for an aircraft to maintain stability, it must have the tendency of returning to the straight, upright and level attitude (Skiba, 2002). Maintaining a straight level flight and a suitable stability requires aircraft designers build bodies in different levels of static and dynamic stability.

Question 2

The wings of the Spirit of St. Louis were attached above the weight. Charles Lindberg was impressed with the lateral stability of aircraft because the weight that was low above the wing would act as a pendulum to minimise chances of rolling if one if one wing dropped. This type of stability is positive since it was intended to return the aircraft to its original position in case of a disturbance (Skiba, 2002).