1) In general low-wing aircrafts have dihedral wing configuration. This dihedral is primarily used for?

   A) High lifting characteristic
   B) Higher longitudinal stability
   C) Higher lateral stability
   D) None of these

   Ans c

2) Wing-tips are primarily used for
   a. Reducing induced drag
   b. Higher longitudinal stability
   c. Higher lateral stability
   d. None of these

   Ans a

3) The typical shape of Upswept and Hoerner wing tips are respectively

   Ans: b

   A)
4) In an aircraft the horizontal tail is primarily used for
   And b
   a. High lifting characteristic
   b. Higher longitudinal stability
   c. Higher lateral stability
   d. None of these

5) In low speed aircraft the primary purpose or leading edge sweep is? Ans a
   a. Delaying stall
   b. Reducing drag
   c. Increasing lift
   d. Increasing longitudinal stability

6) For positive angle of attack the floating elevator will ? Ans a
   a. Go up
   b. Go down
   c. Remain unaffected
   d. Depends upon aircraft

7) Rudder lock is observed Ans a
   a. Beyond sideslip angles for which \( \delta r_{\text{float}} \) becomes more than \( \delta r_{\text{required}} \)
   b. Before sideslip angles for which \( \delta r_{\text{float}} \) becomes more than \( \delta r_{\text{required}} \)
   c. Beyond a fixed sideslip angle for every aircraft
   d. Beyond a fixed rudder deflection

8) Rudder lock can be delayed using Ans c
   a. Only Dorsal Fin
   b. Only Ventral Fin
   c. Both A & B
   d. None of these

9) The rudder lock phenomena may appear when? Ans b
   A) \( C_{n,\delta r} \) for vertical tail is decreased and \( C_{n,\beta} \) for vertical tail is increased
   B) \( C_{n,\delta r} \) for vertical tail is increased and \( C_{n,\beta} \) for vertical tail is decreased
   C) Rudder area is decreased
   D) None of these
10) For similar chord length the aerofoil thickness is increased. How the critical Mach number will change? Ans a
   A) Decrease
   B) Increase
   C) Will depend upon wing span
   D) None of these