Assignment 4

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

1. What issue(s) does a blended wing body (BWB) configuration for a transport aircraft provide?

   - High Range and Endurance
   - Good Structural Load Distribution
   - Quiet Emergency Evacuation
   - Enhanced luxury and comfort for passengers

   7 points

2. Which of the following statements are TRUE regarding engines mounted under the wings of a passenger transport aircraft?

   - Reduction in wing root bending moment
   - Ease in access for maintenance
   - Passenger safety
   - Lower aerodynamic drag at low engine altitudes

   7 points

3. Which of the following statements is/are TRUE with respect to Thrust Vectoring?

   - It improves the takeoff and landing performance
   - It supports the vertical take-off and landing capabilities
   - It increases the nose range of the aircraft
   - It increases the maneuverability

   7 points

4. The key advantage of using a blended wing body is

   - also found in the reduced area of the horizontal stabilizer, reduced weight characteristics, and increased levels of efficiency in the flight range of CG

   7 points

5. Which of the following aircrafts have forward swept wings?

   - Boeing 787
   - Airbus A350
   - Sukhoi Su-57
   - General Dynamics F-16 Fighting Falcon

   7 points

6. Which of the following statements are TRUE with respect to Thrust Vectoring?

   - Increases the wing weight for the fixed span
   - Decreases the drag across the wing
   - Adjusts the aerodynamic center relative to the CG
   - Reduces the wing cross-sectional area

   7 points

7. Which of the following features provide improved flight quality over wings?

   - Brake
   - Flap
   - Vortex Generator
   - Stabilizer

   7 points

8. Which of the following features enhance the flight characteristics of the F/A-18 Hornet?

   - Three Surface Design (Cone - Wedge - Tail)
   - Pusher Engine Configuration
   - Spear Stabilized Wing
   - T-27 Configuration

   7 points

9. Which of the following features are beneficial to the transport aircraft?

   - Aerodynamically efficient
   - Ability to increase maximum drag for takeoff and landing
   - Low Propulsion Efficiency and Emission Levels
   - Ability to build and lower maintenance costs
   - Landing gear should be close to 50%

   7 points

10. Which of the following features benefit by providing the wings?

    - Reduction in the strength of the structural surface
    - The equivalent span extension without increasing the drag
    - Geometry in the aircraft design
    - Reduction in the wing weight

    7 points

   The equivalent span extension without increasing the drag bending moment