Unit 8 - Week 6: Intake & Nozzle

Assignment 06

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

1. The purpose of any aircraft intake is to provide
   a. Minimum drag figure
   b. Sufficient air supply to the compressor
   c. Reduction in velocity
   d. All of the above

   Yes, the answer is incorrect. Score: 1 point

   Accepted Answers:
   a) All of the above

2. For supersonic flow through the diffuser
   a. Pressure increases but velocity remains constant
   b. Pressure increases and velocity increases
   c. Pressure decreases and velocity increases
   d. Pressure remains constant but velocity increases

   Yes, the answer is incorrect. Score: 1 point

   Accepted Answers:
   b) Pressure increases and velocity increases

3. Which one is a correct statement about a damper duct?
   a. Divergent section always works as a diffuser
   b. It’s always active as a control device
   c. It can work as a nozzle or a diffuser but it depends on how it’s built
   d. None of them

   Yes, the answer is incorrect. Score: 1 point

   Accepted Answers:
   c) It can work as a nozzle or a diffuser but it depends on how it’s built

4. When the inlet flow is supersonic through the divergent duct, the flow velocity along the length should be
   a. Increased
   b. Decreased
   c. Both increased or decreased
   d. Can’t say

   Yes, the answer is incorrect. Score: 1 point

   Accepted Answers:
   a) Increased

5. In case of C-D Nozzles, the section of the nozzle, where cross-sectional area is minimum, is called as ______ of the nozzle.
   a. inlet
   b. Diffuser
   c. Thrust
   d. None of them

   Yes, the answer is incorrect. Score: 1 point

   Accepted Answers:
   a) inlet

6. Run efficiency is defined as
   a. Actual total pressure loss/Actual total pressure loss
   b. Actual total temperature loss/ideal total temperature loss
   c. Actual total temperature rise/ideal total temperature rise
   d. Actual total pressure rise/ideal total pressure rise

   Yes, the answer is incorrect. Score: 1 point

   Accepted Answers:
   c) Actual total pressure rise/ideal total pressure rise

7. When the inlet flow is supersonic through the convergent channel, the velocity of the jet, in comparison with the inlet flow, should be
   a. Increased
   b. Decreased
   c. Both increased or decreased
   d. Can’t say

   Yes, the answer is incorrect. Score: 1 point

   Accepted Answers:
   a) Increased

8. If the nozzle exit pressure is lower than the ambient pressure, then the flow through the nozzle is said to be
   a. Over-expanded
   b. Under-expanded
   c. Critically expanded
   d. None of them

   Yes, the answer is incorrect. Score: 1 point

   Accepted Answers:
   a) Over-expanded

9. Per subsonic flow through the nozzle
   a. Pressure increases and velocity increases
   b. Pressure remains constant but velocity increases
   c. Pressure decreases but velocity remains constant
   d. Pressure decreases and velocity increases

   Yes, the answer is incorrect. Score: 1 point

   Accepted Answers:
   b) Pressure remains constant but velocity increases

10. For a given supersonic environment conditions, mass flow rate through circular nozzle is
   a. Minimized
   b. Maximum
   c. Zero
   d. Can’t say

   Yes, the answer is incorrect. Score: 1 point

   Accepted Answers:
   b) Maximum

11. In general, nozzle used in engines for subsonic aircraft are
   a. Convergent
   b. Divergent
   c. Convergent - Divergent nozzle
   d. None of these

   Yes, the answer is incorrect. Score: 1 point

   Accepted Answers:
   b) Divergent

Due on 2019-09-11, 23:09 IST.