Assignment 1

Due on 2020-09-30, 23:59 IST.

1) Which of the following affect(s) the Consumer Specifications?
   - Design requirements
   - Operational requirements
   - Environmental conditions
   - Technological developments

2) Which of the following tasks are carried out during Conceptual Phase of aircraft design?
   - Estimate component masses, performance, and cost
   - Focus on configuration
   - Ensure design practicality
   - Carry out initial sizing & layout

3) Which of the following tasks are carried out in the Preliminary Design Stage?
   - Evaluating the competing concepts
   - Establishing the performance goals
   - Selecting the preferred concepts
   - Carrying out the refined sizing

4) Which of the following tasks are not carried out in the Conceptual Design Stage?
   - Establish concept feasibility
   - Identify requirements that drive the design
   - Ensure design practicality
   - Carry out refined sizing & layout

5) The role of the aircraft design team is to:
   - Develop the conceptual design
   - Prepare the detailed design
   - Carry out theVerification
   - Establish the operational requirements

6) The scope for taking decisions becomes smaller as we progress in the aircraft design process.
   - Correct
   - Incorrect

7) The development of aircraft conceptual design involves the following tasks. Select all that apply.
   - Conceptual design
   - Preliminary design
   - Detailed design

8) Match the tasks carried out with their respective stages in the aircraft design process.
   - Development of the functional and configuration requirements
   - Identification of the requirements that drive the design
   - Detailed performance estimation

9) What fraction of the Life Cycle Cost is committed by the decisions taken in the Concept Exploration phase?
   - Approximately 80 - 90 %
   - Approximately 50 - 60 %
   - Approximately 30 - 40 %
   - Approximately 10 - 20 %

10) What is the percentage of total effort involved in the Conceptual Design stage?
    - Approximately 30 - 40 %
    - Approximately 10 - 15 %
    - Approximately 5 - 10 %
    - Approximately 1 - 5 %