

---

---

# ACS College of Engineering, Bangalore

Affiliated to VTU, Accredited by NAAC with 'A' Grade, Accredited by NBA

## Aeronautical Engineering Department

### Assignment- MODULE II & III

- 1 Explain sweep angle selection criteria.
- 2 What is fuselage fineness ratio? Explain its importance in subsonic & supersonic aircraft
- 3 What are quantitative fuselage shapes?
- 4 Briefly explain various tail arrangements with sketches
- 5 List down the various phases of landing & mention the expressions for respective distances.
- 6 explain the passive lift enhancement techniques
- 7 Derive an expression for landing ground roll distance
- 8 Explain balance field length? Write down the expression for the same.
- 9 Briefly describe the active lift enhancement approaches.
- 10 Explain the spreadsheet structure for turbojet engine sizing
- 11 Explain the spreadsheet structure for propeller engine.
- 12 Outline the general methodology for designing a propeller propulsion system
- 13 Explain the turbojet engine sizing
- 14 Describe the installed thrust correction for turbojet engine with neat graph

#### **Note:**

**As per the instructions from VTU, there might not be any extension of the last working day.**

**We are supposed to use online facilities and try to teach you guys.**

**Prescribed text books have already been posted. Let me know if required, will post it again.**

**Also there is some material available at <https://nptel.ac.in/courses/101106035/>**

**Should you have any doubts, we will have online sessions.**

**Submission Date: 01-04-2020 (hand written assignment, scanned and submitted to me [dhanyaprakash@acsce.edu.in](mailto:dhanyaprakash@acsce.edu.in))**

**Compulsory for all the 8<sup>th</sup> Sem students**