

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
Diploma Engineering, Mid semester Examination

Semester: 3RD**Subject Code: (03613201)****Subject Name: (Introduction to Aeronautics)****Date: (05/08/2022)****Time: (1hr: 30min)****Total Marks: 40****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. English version is considered to be Authentic.

Q.1 Answer any six out of Ten. (2 Marks Each) (12)

1. Write down classification of Aircraft based on Mach number and Types of engine.
2. What is aeronautics?
3. Write down Newton's 2nd Law.
4. What is Angle of Attack?
5. Define Lift and Drag.
6. Define Thrust and Weight.
7. How Aircraft is Differs from Airplane?
8. Write down NACA 2412.
9. Write down NACA 25019.
10. What is unmanned aerial vehicle?

Q.2 A) Explain NACA 5-digit series. (03)**OR**

A) Write down Nomenclature of Airfoil with Neat sketch. (03)

B) Classify Flight Vehicles (03)

OR

B) Write down MSL properties and Calculate the Temperature at 9 km altitude (03)

C) Explain NACA 4-digit series. (04)

OR

C) Write down types of altitude and define any 3. (04)

D) Explain Bernoulli's Principle of Differential pressure. (04)

Q.3 A) Give the nomenclature of airplane with neat sketch. (03)

B) Write down the application of an Aircraft. (03)

C) Explain Newton's laws of Motion. (04)

D) How does Airplane Wing generates lift. (04)