

PARUL UNIVERSITY
Faculty of Engineering & Technology
B Tech Examination

Subject Name: Introduction to Aeronautics

Subject Code: 203101211

Branch/Semester: Aeronautical/3rd

[Date: 03/08/2022]

[Time: 02:30 to 04:00 PM]

[Total Marks: 40]

Sr.No.		Marks
Q.1	(A) Multiple Choice Questions	05

- (1) Supersonic Mach Number is ____

(a) = 1	(b) < 1
(c) > 1	(d) None of above
- (2) Wings are used to ____ the airplane

(a) control	(b) lift
(c) propel	(d) None of above
- (3) _____ is controlled by the rudder on the tail of the plane.

(a) Roll	(b) Yaw
(c) Pitch	(d) None of above
- (4) The _____ provides space and support for cargo, passengers, and other equipment.

(a) cockpit	(b) engine
(c) fuselage	(d) None of above
- (5) Heat is added in the _____ of the engine.

(a) turbine	(b) compressor
(c) combustion chamber	(d) None of above

(B) Fill in blanks	05
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- (1) _____ is a component of engine that works in adverse pressure gradient condition.
- (2) The aircraft structure that provides wing its aerodynamic shape is _____.
- (3) Tail section of the airplane is termed as _____.
- (4) Spoilers on the wings _____ the lift.
- (5) Pitching moment is about the _____ axis of the airplane.

Q.2	Attempt any four(Short Questions)	12
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- (1) Illustrate aircraft components with sketch.
- (2) What are the components of wing structure that support the airframe loads?
- (3) What is the function of nozzle of an engine?
- (4) What are the different types of aircraft engines?

Enrollment No.: _____

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(5) Explain working of elevators in controlling the airplane.

Q.3 Attempt any two 08

(1) Explain Elevator Trim Tab System.

(2) What is the function of spar?

(3) Briefly describe Ramjet engine.

Q.4 (A) Compulsory 05

Illustrate P-v and T-s diagram of an ideal turbojet (gas turbine) engine.

(B1) How does rocket engine works? 05

OR

(B2) How does wings generate lift? 05