

# CBCS SCHEME

USN

--	--	--	--	--	--	--	--	--	--

18AE/AS651

Sixth Semester B.E. Degree Examination, July/August 2022

## History of Flight & Technology Forecast

Time: 3 hrs.

Max. Marks: 100

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

### Module-1

- 1 a. With relevant figure, briefly explain about the ornithopters. (10 Marks)  
b. Write a short note on Balloon flight. (10 Marks)

OR

- 2 a. Write short note on:  
(i) The Glider man. (10 Marks)  
(ii) The Interregnum. (10 Marks)  
b. Briefly explain the following:  
(i) The true inventor of Airplane. (10 Marks)  
(ii) Extending the Glider tradition. (10 Marks)

### Module-2

- 3 a. Discuss briefly about the development of aircraft over the years. (10 Marks)  
b. Write short note on biplanes and monoplanes. (10 Marks)

OR

- 4 a. Explain the concept of aircraft triangle with relevant sketches. (10 Marks)  
b. Write short note on first practical approach on Airplane by Wright brothers. (10 Marks)

### Module-3

- 5 a. Draw a neat labeled sketch of an airplane, name its components and briefly explain about their functions. (12 Marks)  
b. Write a short note on conventional control. (08 Marks)

OR

- 6 Briefly explain the following:  
a. Powered control.  
b. Basic instrument for flying.  
c. Different types of flight vehicles.  
d. Control actuation. (20 Marks)

### Module-4

- 7 a. Briefly explain :  
(i) Monocoque.  
(ii) Semi monocoque.  
(iii) Geodesic constructions. (15 Marks)  
b. Briefly explain Hooke's law with relevant figure. (05 Marks)

18AE651

OR

- 8 a. Write a short note on metallic and non metallic materials. (10 Marks)  
b. Discuss the importance and application of aluminium alloy in aircraft. (10 Marks)

Module-5

- 9 a. With relevant sketch, explain the working principles of operation of rocket. (10 Marks)  
b. List out the different types of rockets and explain about it with applications. (10 Marks)

OR

10 Write short note on:

- a. Piston engines.  
b. Jet engines.  
c. Turbo prop.  
d. Exploration into space.

(20 Marks)

\* \* \* \* \*