

CBCS SCHEME

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18AE/AS651

Sixth Semester B.E. Degree Examination, June/July 2023 History of Flight and 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. Briefly summarize the classification of aircrafts with a flow chart. (12 Marks)
b. Differentiate lighter than air and heavier than air aircrafts with suitable examples. (08 Marks)

OR

- 2 a. Illustrate the contributions of Sir George Cayley to the field of aviation. (10 Marks)
b. Illustrate the contributions of Otto-Lilienthal to the field of aviation. (10 Marks)

Module-2

- 3 a. Summarize the influence of Wright-Brother's in modern day aviation. (10 Marks)
b. With a neat sketch, explain the configuration of Wright-Flyer-I. (10 Marks)

OR

- 4 a. Briefly explain the evolution of aircraft propulsion over the years. (10 Marks)
b. Describe the development of flight aerodynamics over the years. (10 Marks)

Module-3

- 5 a. With a neat sketch, explain the various components of an airplane and their functions. (12 Marks)
b. Differentiate between fixed wing and rotary wing aircraft. (08 Marks)

OR

- 6 a. Write short notes on the flight control system of aircraft. (10 Marks)
b. Explain the 6-basic aircraft instruments. (10 Marks)

Module-4

- 7 a. With a neat sketch, explain the types of fuselage construction. (10 Marks)
b. Write short notes on the metallic and non-metallic materials used in aircraft. (10 Marks)

OR

- 8 a. Explain the structural members of a typical wing with a neat sketch. (10 Marks)
b. Define stress and strain. Draw the typical stress-strain curve for a mild-steel. (10 Marks)

Module-5

- 9 a. With a neat sketch, explain the working of high-bypass turbofan engine. (10 Marks)
b. With a neat sketch, explain the working of a turbojet engine with after burner. (10 Marks)

OR

- 10 a. Explain the principle of Rocket propulsion. (08 Marks)
b. Explain the various types of Rockets and typical applications. (12 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.