

Fifth Semester B.E. Degree Examination, Feb./Mar. 2022

History of Flight and Technology Forecast

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. Briefly note on Balloon flight and its development in early era. (08 Marks)
 b. What are the contributions of Sir George Cayley in the field of aeronautics? (08 Marks)

OR

- 2 a. List out the achievements of OTTO LILIENTHAL and its developments. (08 Marks)
 b. Explain ornithopters. How it is developed during early years. (08 Marks)

Module-2

- 3 a. Write a brief note on Aeronautical Triangle and their works in research. (08 Marks)
 b. Explain what are biplanes and manoplanes with a neat sketches. (08 Marks)

OR

- 4 a. Differentiate the following ;
 i) Anhedral and dihedral.
 ii) Swept forward using and swept back wing
 iii) Combat aircraft and commercial aircraft (08 Marks)
 b. Write a brief note early development of aircraft structures and materials. (08 Marks)

Module-3

- 5 Classify and explain different types of flight vehicles. (16 Marks)

OR

- 6 Explain the main components of the aircraft with a neat sketch. (16 Marks)

Module-4

- 7 Explain Hooke's law with the supporting graph and sketch. (16 Marks)

OR

- 8 Explain the following :
 a) Monocoque
 b) Semi monocoque
 c) Geodesic construction
 d) Metallic and non-metallic material (16 Marks)

Module-5

- 9 Classify the types of rockets and explain principle of operation of rocket. (16 Marks)

OR

- 10 Explain the working principle with a neat sketch :
 a) Piston engine
 b) Turbo – jet engine (16 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.