



VII SEMESTER B.TECH. (AERONAUTICAL/AUTOMOBILE ENGINEERING)

END SEMESTER EXAMINATIONS, NOV/DEC 2022

SUBJECT: AIRSHIP TECHNOLOGY [AAE -4047]

REVISED CREDIT SYSTEM

(XX/11/2022)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **ALL** the questions.
- ❖ Missing data may be suitably assumed.

Q No	Question	Marks	CO attained	BT level
1A	Provide brief weight estimation sub module for stratosphere airship	5	CO5	3
1B	Classify the airship according to its structures also mention its merits and demerits	3	CO1	2
1C	Identify the ideal shape of airship with minimum drag	2	CO2	3
2A	Differentiate the main features difference in design methodology of airship, stratosphere airship and aerostat.	5	CO3	4
2B	Draw typical schematic diagram of airship with their components and explain their functions. Also write down the merits and demerits of airship compared to aircraft.	3	CO2	3
2C	Write down few points related to buoyancy control in airship	2	CO3	2
3A	Draw the flowchart of methodology in design mode	5	CO4	3
3B	Explain the application of Air ballonets in airship and mention its function from ground to pressure height	3	CO3	3
3C	What are general properties need to be considered for airship envelope material selection	2	CO2	2
4A	Explain in detail about components of infrastructure system for airship operations	5	CO5	3
4B	Differentiate between conventional airship and stratosphere airship	3	CO2	2
4C	Write down brief notes about polymeric materials for coating and films	2	CO4	2
5A	Explain the function and usage of stratosphere airship in modern era and also mention its challenges	5	CO3	3

5B	Explain the functions of mooring mast and also mention various types of mooring masts available in the market	3	CO4	2
5C	Write brief note about Aerostat and what are the additional properties need to be considered for its design compared to airship design.	2	CO2	2