Name:

**Enrolment No:** 



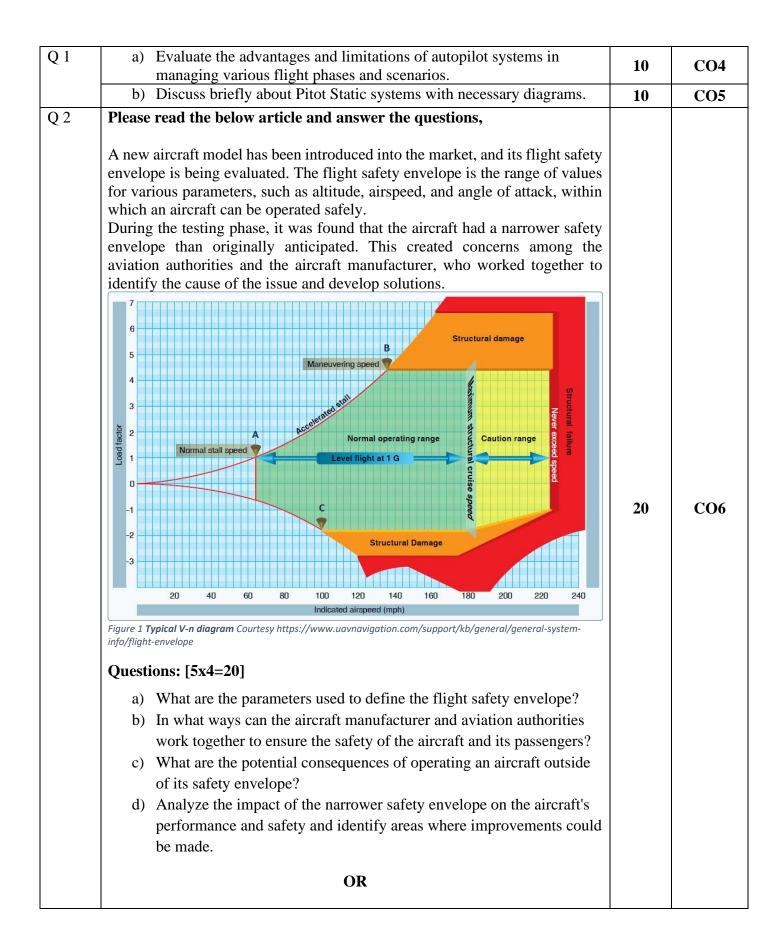
## UPES Supplementary Examination, December 2023

Course: Aircraft Systems & Instruments Program: B.Tech ASE Course Code: ASEG3024 Semester: V Time : 03 hrs. Max. Marks: 100

**Instructions: All questions are compulsory Use figures to explain the concept.** 

## SECTION A (5Qx4M=20Marks)

S. No.		Marks	СО
Q 1	What are the primary classifications of landing gear systems in aviation?	4	CO2
Q 2	How does a typical starting system work for a gas turbine engine?	4	CO3
Q 3	If an aircraft's airspeed indicator is not functioning properly, what impact could it have on flight operations?	4	CO5
Q 4	How do fire protection systems detect and suppress fires in different areas of an aircraft?	4	CO3
Q 5	What is the difference between an evaporative vapor cycle system and a standard vapor cycle system in terms of operation and benefits?	4	CO4
	SECTION B		
	(4Qx10M= 40 Marks)		
Q 1	If an aircraft's navigation system fails, what alternative methods could a pilot use to navigate?	10	CO6
Q 2	How can engine instruments be adjusted and monitored to optimize engine performance during different phases of a flight? OR How does an altimeter use atmospheric pressure to determine an aircraft's	10	CO5
	altitude?		
Q 3	How does a malfunction or cyberattack on a digital fly-by-wire system affect an aircraft's control and safety?	10	CO1
Q 4	Explain the evolution of aircraft control systems from conventional, fully powered flight controls to modern digital fly-by-wire systems.	10	CO1
	SECTION-C (2Qx20M=40 Marks)		



		How does a pilot Navigate? How is the navigation system useful for an aircraft? Which navigation system is the most used in aviation? How did aircraft navigate before GPS?		
--	--	---	--	--