CBCS	SCHEME
THE THEORY WHEN THE PERSON WAS A PROPERTY OF THE PERSON WHEN THE PERSON WAS A PERSON WHEN THE PERSON WHEN THE PERSON WAS A PERSON WHEN THE PERSON WHEN THE PERSON WAS A PERSON WHEN THE PERSON WHEN THE PERSON WAS A PERSON WHEN THE PERSON WHEN THE PERSON WHEN THE PERSON WAS A PERSON WHEN THE PERSON WHEN	

USN	ite Cil	46 0 = 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	17AE32	
Third Semester B.E. Degree Examination, Dec.2019/Jan.2020				
Elements of Aeronautics				
Tin	ne:		arks: 100	
	N	ote: Answer any FIVE full questions, choosing ONE full question from each mo	dule.	
		Module-1		
1	a.	Define aeronautics, aircraft and airplane.	(06 Marks)	
	b.	Why we are discussing these altitudes and their dependencies?	(04 Marks)	
	C.	Describe the major components of a piston engine airplane with neat diagram.	(10 Marks)	
		OR		
2	a.	Explain with neat diagram showing CG, lateral axis, vertical axis, and longitudina reference to airplane.	al axis with (10 Marks)	
	b. 1	Explain with neat sketch monocoque, semimonocoque and truss structure of aircra		
			(10 Marks)	
		Module-2		
3	a.	Derive the expression for h.	(08 Marks)	
	b.	Derive the expression for gradient and isothermal layer.	(12 Marks)	
4		OR		
4	a. b.	Describe types of drag.  Define CP, AC, mach number.	(07 Marks) (03 Marks)	
	c.	Describe Bernoulli's theorem and its application for generation of lift and measurements		
		airspeed.	(10 Marks)	
		Module-3		
5	a.	Describe the classification of aircraft power plants.	(08 Marks)	
	b.	Explain Brayton cycle with neat diagram.	(12 Marks)	
6	,	OR		
0	a.	Explain the principle of operation of turboprop, turbojet, turbofan with neat labele	(10 Marks)	
	b.	Describe Ramjet, Scramjet and thrust augmentation with neat labeled diagram.	(10 Marks)	
		Module-4		
7	a.	With neat diagram explain the difference between the effects of flaps and slats on		
	b.	Explain the effects of correct and in correct angles of bank with neat diagram.	(10 Marks) (10 Marks)	
8	a.	OR Describe stability with neat diagram.	(10 Marks)	
	b.	Explain aerobatics and inverted manoeuvre.	(10 Marks)	
		Module-5		
9	a.	Explain gravity feed system and pressure feed system with neat labeled diagram.	(10 Marks)	
	b.	Explain relief valve.	(10 Marks)	
		OR		
10	a. b.	With neat diagram explain Pitot–static system.  Explain a typical continuous flow oxygen system.	(10 Marks)	
	0.	* * * * *	(10 Marks)	