

Lesson Plan

Name of the Faculty: Ms. Tusharika

Discipline: Aeronautical Engineering

Semester: 5th

Subject: Elements of Aeronautics

Work Load (Lecture/Practical) per week (in hours): Lectures- , Practicals-

Week	Theory		Practical	
	Lecture day	Topic (including assignment/test)	Practical day	Topic
1 st	1 st	Early airplanes, biplanes and monoplanes,	1 st	
	2 nd	Developments in aerodynamics, materials, structures and propulsion over the years.		
	3 rd	Developments in aerodynamics, materials, structures and propulsion over the years.		
	4 th	Components of an airplane and their functions.		
2 nd	5 th	Different types of flight vehicles, classifications.	2 nd	
	6 th	Conventional control,		
	7 th	Powered control,		
	8 th	Basic instruments for flying,		
3 rd	9 th	Typical systems for control actuation.	3 rd	
	10 th	Revision and Assignments		
	11 th	Test		
	12 th	Physical properties and structure of the atmosphere,		
4 th	13 th	Physical properties and structure of the atmosphere,	4 th	
	14 th	Physical properties and structure of the atmosphere,		
	15 th	Temperature, pressure and altitude relationships,		
	16 th	Temperature, pressure and altitude relationships,		
5 th	17 th	Numerical	5 th	
	18 th	Evolution of lift, drag and moment.		
	19 th	Evolution of lift, drag and moment.		
	20 th	Aerofoils,		

6 th	21 st	Aerofoils,	6 th	
	22 nd	Numerical		
	23 rd	Mach number, Maneuvers.		
	24 th	Revision and Assignment		
7 th	25 th	Test	7 th	
	26 th	General types of construction, Monocoque, semi-monocoque and geodesic construction,		
	27 th	General types of construction, Monocoque, semi-monocoque and geodesic construction		
8 th	28 th	General types of construction, Monocoque, semi-monocoque and geodesic construction	8 th	
	29 th	Typical wing and fuselage structure.		
	30 th	Typical wing and fuselage structure.		
	31 st	Typical wing and fuselage structure.		
9 th	32 nd	Metallic and non-metallic materials,	9 th	
	33 rd	Metallic and non-metallic materials,		
	34 th	Metallic and non-metallic materials,		
	35 th	Use of aluminium alloy, titanium, stainless steel and composite materials.		
10 th	36 th	Use of aluminium alloy, titanium, stainless steel and composite materials.	10 th	
	37 th	Use of aluminium alloy, titanium, stainless steel and composite materials.		
	38 th	Revision and Assignments		
	39 th	Test		
11 th	40 th	Basic ideas about piston,	11 th	
	41 st	Basic ideas about piston,		
	42 nd	turboprop and jet engines,		
	43 rd	turboprop and jet engines,		
12 th	44 th	turboprop and jet engines,	12 th	
	45 th	Use of propeller and jets for thrust production..		
	46 th	Use of propeller and jets for thrust production..		
	47 th	Use of propeller and jets for thrust production..		
13 th	48 th	Numerical	13 th	
	49 th	Comparative merits,		
	50 th	Comparative merits,		
	51 st	Principles of operation of rocket,		
14 th	52 nd	Principles of operation of rocket,	14 th	
	53 rd	types of rockets and typical applications,		

	54th	types of rockets and typical applications,		
	55th	types of rockets and typical applications,		
	56th	Exploration into space		
15th	57th	Exploration into space	15th	
	58th	Exploration into space		
	59th	Numerical and Assignment		
	60th	Test		