



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)
Dundigal, Hyderabad-500043

AERONAUTICAL ENGINEERING

ASSIGNMENT QUESTIONS

Course Name	:	AIRCRAFT SYSTEMS
Course Code	:	A62113
Class	:	III B. Tech II Semester
Branch	:	Aeronautical Engineering
Year	:	2017 – 2018
Course Coordinator	:	Ms. G.Sravanthi, Assistant Professor, Department of Aeronautical Engineering
Course Faculty	:	Ms. G.Sravanthi , Mr.R.Suresh Kumar, Assistant Professor, Department of Aeronautical Engineering

OBJECTIVES

To meet the challenge of ensuring excellence in engineering education, the issue of quality needs to be addressed, debated and taken forward in a systematic manner. Accreditation is the principal means of quality assurance in higher education. The major emphasis of accreditation process is to measure the outcomes of the program that is being accredited.

In line with this, Faculty of Institute of Aeronautical Engineering, Hyderabad has taken a lead in incorporating philosophy of outcome based education in the process of problem solving and career development. So, all students of the institute should understand the depth and approach of course to be taught through this question bank, which will enhance learner's learning process.

S. No	QUESTION	Blooms Taxonomy level	Course Outcomes
ASSIGNMENT-I			
UNIT - I INTRODUCTION TO AIRCRAFT SYSTEMS AND INTEGRATION			
1	Explain the different aircraft systems	Understand	1
2	Explain component integration level	Understand	1
3	Describe the business environment	Remember	1
4	Explain system integration level.	Understand	1
5	Write short notes on Interdependence of aircraft systems ,Design drivers	Understand	1
6	Describe working principle of Variable Speed Constant Frequency(VSCS)	Understand	2
7	Explain AC power generation in aircraft	Remember	3
8	Write the different types of Power conversions required in aircraft	Understand	2
9	Write short notes on the following Autotransformer,Inverter,Transformer Rectifier Unit	Understand	2
10	Write short notes on the following 270VDC System , more electric aircraft.	Understand	2
11	Explain with suitable diagram the working of a hydraulic system.	Remember	4
12	Write short notes on Hydraulic fluids, Fluid temperature, and Hydraulic fluid flow rate.	Understand	4

13	List different types of hydraulic pumps. Explain the working of anyone.	Remember	4
ASSIGNMENT-II			
1	Explain what is a landing gear? Explain the nose landing gear system with Neat sketches.	Understand	5
2	List out various types of braking and anti skidding systems in aircraft and discuss the working principle briefly.	Remember	5
3	Write short notes on Wing and engine anti icing system, Engine Start ,Thrust reversers	Understand	6
4	What is a Pitot-Static system? Explain how a pitot static pressure is used for Measuring airspeeds, aircraft altitudes and vehicle speeds	Understand	6
5	Justify the need for control environment for crew, passengers and equipment?	Understand	6
6	Discuss the different HEAT source for heat load G tolerance, Humid control, MSOC, Cabin pressurization	Understand	6
7	Explain the pitot static system	Remember	6
8	Write the important components of FADEC and Write its advantages.	Understand	7
9	Explain pilot in loop Engine control system (Manual).	Remember	7
10	Explain Limited authority engine control system with suitable block diagram	Understand	7
11	Explain the Sequence of Engine starting	Remember	7
12	Explain the important Engine indicators/reading parameters / Engine monitoring- sensors.	Understand	7

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HOD, AE